Jan Delaval Page 1 Reference Librarian Biotechnology & Chemical Library CM1 1E07 - 703-308-4498 jan.delaval@uspto.gov

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L65 ANSWER 1 OF 49 HCAPLUS COPYRIGHT 2002 ACS

AN 2002:850136 HCAPLUS

DN 137:358064

TI Stem cells of the **islets** of **Langerhans** and their use in treating diabetes mellitus

IN Habener, Joel F.; Zulewski, Henryk; Thomas, Melissa K.; Abraham, Elizabeth J.; Vallejo, Mario; Leech, Colin A.

PA USA

SO U.S. Pat. Appl. Publ., 51 pp., Cont.-in-part of U.S. Ser. No. 731,261. CODEN: USXXCO

DT Patent

LA English

IC ICM A61K048-00

NCL 424093700

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 2, 9, 15

FAN.CNT 2

ran.Cni z										
	PATENT NO.		KIND	DATE		APPLICATION NO.	DATE			
ΡI	US	2002164307	A1	20021107		US 2001-963875	20010926 <			
	US	2001046489	A1	20011129		US 2000-731261	20001206 <			
PRAI	US	1999-169082P	Р	19991206	<					
	US	2000-215109P	P	20000628						
	US	2000-238880P	P	20001006						
	US	2000-731261	A2	20001206						

AB Methods and compns. are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin and the GLP-1 receptor have been identified as mol. markers for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby stem cells which express one or both

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of nestin and GLP-1R can be isolated from pancreatic islets and cultured
to obtain further stem cells or pseudo-islet like structures. Methods for
ex vivo differentiation of the pancreatic stem cells are disclosed.
Methods are described whereby pancreatic stem cells can be isolated,
expanded, and transplanted into a patient in need thereof,
either allogeneically, isogeneically or xenogenically, to provide
replacement for lost or damaged insulin-secreting cells or other
cells.
stem cell islet Langerhans isolation nestin GLP1R
diabetes
Antibodies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
   (GAD65; stem cells of the islets of Langerhans and
   their use in treating diabetes mellitus)
Transcription factors
RL: PAC (Pharmacological activity); BIOL (Biological study)
   (IDX-1; stem cells of the islets of Langerhans and
   their use in treating diabetes mellitus)
Liver
   (hepatocyte, formation of; stem cells of the islets of
   Langerhans and their use in treating diabetes mellitus)
Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
   (nestins, stem cell marker, amino acid sequence of; stem cells of the
   islets of Langerhans and their use in treating
   diabetes mellitus)
Cell differentiation
   (of insulin-producing cells; stem cells of the islets
   of Langerhans and their use in treating diabetes mellitus)
Glucagon-like peptide-1 receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
   (stem cell marker; stem cells of the islets of
   Langerhans and their use in treating diabetes mellitus)
Animal tissue culture
Antidiabetic agents
Diabetes mellitus
Endoscopes
Immunosuppressants
Molecular cloning
  Pancreatic islet of Langerhans
Protein sequences
  Transplant and Transplantation
cDNA sequences
   (stem cells of the islets of Langerhans and their
   use in treating diabetes mellitus)
Hepatocyte growth factor
RL: PAC (Pharmacological activity); BIOL (Biological study)
   (stem cells of the islets of Langerhans and their
   use in treating diabetes mellitus)
Cell
   (stem, neural; stem cells of the islets of Langerhans
   and their use in treating diabetes mellitus)
Collagens, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
    (type IV, antibodies specific for; stem cells of the islets
   of Langerhans and their use in treating diabetes mellitus)
Pancreatic islet of Langerhans
    (.alpha.-cell; stem cells of the islets
   of Langerhans and their use in treating diabetes mellitus)
Transforming growth factors
 RL: PAC (Pharmacological activity); BIOL (Biological study)
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(.beta.-; stem cells of the islets of Langerhans

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and their use in treating diabetes mellitus)
    Pancreatic islet of Langerhans
ΤТ
        (.beta.-cell; stem cells of the islets of
        Langerhans and their use in treating diabetes mellitus)
IT
     9004-10-8, Insulin, biological studies
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (formation of; stem cells of the islets of Langerhans
        and their use in treating diabetes mellitus)
ΤТ
    11028-71-0, Concanavalin a
    RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (stem cells of the islets of Langerhans and their
        use in treating diabetes mellitus)
     50-99-7, Glucose, biological studies
                                            62229-50-9, Eqf
ΙΤ
                                                              89750-14-1,
    Glucagon-like peptide I 104625-48-1, Activin a 106096-93-9,
                                  141732-76-5, Exendin 4
                                                           148348-15-6,
    Fibroblast growth factor 2
     Fibroblast growth factor 7
                                  163150-12-7, Betacellulin
     RL: PAC (Pharmacological activity); BIOL (Biological study)
        (stem cells of the islets of Langerhans and their
        use in treating diabetes mellitus)
ΙΤ
    79217-60-0, Cyclosporin
                               104987-11-3, Fk506
    RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (stem cells of the islets of Langerhans and their
       use in treating diabetes mellitus)
     474865-30-0
                  474865-31-1
                                474865-32-2
                                               474865-33-3
                                                             474865-34-4
ΙΤ
     474865-35-5
                  474865-36-6
                                 474865-37-7
                                               474865-38-8
                                                             474865-39-9
     474865-40-2
                  474865-41-3
                                474865-42-4
                                               474865-43-5
                                                             474865-44-6
     474865-45-7
                  474865-46-8
                                474865-47-9
                                              474865-48-0
                                                             474865-49-1
                                                             474865-54-8
     474865-50-4
                  474865-51-5
                                474865-52-6
                                              474865-53-7
                                             474865-58-2
                                                             474865-59-3
     474865-55-9
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                                 474865-62-8 474865-63-9
                                                             474865-64-0
     474865-60-6
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                                                             474865-69-5
                                                             474865-74-2
     474865-70-8
                  474865-71-9
                                474865-72-0
                                             474865-73-1
    474865-75-3
                  474865-76-4
                                474865-77-5
                                               474865-78-6
                                                             474865-79-7
                                 474865-82-2
                                               474865-83-3
                                                             474865-86-6
     474865-80-0
                   474865-81-1
    RL: PRP (Properties)
        (unclaimed nucleotide sequence; stem cells of the islets of
       Langerhans and their use in treating diabetes mellitus)
ΙT
     474865-87-7
     RL: PRP (Properties)
        (unclaimed protein sequence; stem cells of the islets of
        Langerhans and their use in treating diabetes mellitus)
IT
     474865-84-4
                  474865-85-5
     RL: PRP (Properties)
        (unclaimed sequence; stem cells of the islets of
        Langerhans and their use in treating diabetes mellitus)
L65
    ANSWER 2 OF 49 HCAPLUS COPYRIGHT 2002 ACS
     2001:798040 HCAPLUS
ΑN
DN
    135:339222
TΙ
     Inhibition of abnormal cell proliferation with camptothecin or a
     derivative, analog, metabolite, or prodrug thereof, and combinations
     including camptothecin
ΙN
     Rubinfeld, Joseph
     Supergen, Inc., USA:
PΑ
     PCT Int. Appl., 38 pp.
SO
    CODEN: PIXXD2
DT
    Patent
    English
LA
    ICM A61K031-00
IC
CC
    1-6 (Pharmacology)
FAN.CNT 3
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KIND DATE
                                         APPLICATION NO. DATE
     PATENT NO.
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                                          ______
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                    A2 20011101
                                    WO 2001-US12848 20010419
    WO 2001080843
PΤ
           AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
            HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
            LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
             RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
             VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                         US 2000-553710 20000420 <--
    US 6420378
                     В1
                         20020716
PRAI US 2000-553710
                     A1 20000420
    US 1999-418862
                     A2
                          19991015 <--
AΒ
    A method for treating diseases assocd. with abnormal cell proliferation
    comprises delivering to a patient in need of treatment a compd. selected
     from 20(S)-comptothecin, an analog of 20(S)-comptothecin, a deriv. of
    20(S)-camptothecin, a prodrug of 20(S)-camptothecin, and pharmaceutically
    active metabolite of 20(S)-camptothecin, in combination with an effective
    amt. of one or more agents selected form the group consisting of
    alkylating agent, antibiotic agent, antimetabolic agent, hormonal agent,
    plant-derived agent, anti-angiogenesis agent and biol. agent. The method
    can be used to treat benign tumors, malignant or metastatic tumors,
    leukemia and diseases assocd. with abnormal angiogenesis.
    camptothecin cell proliferation inhibition tumor; metastasis tumor
ST
    camptothecin cell proliferation inhibition; angiogenesis disease
    camptothecin cell proliferation inhibition; leukemia camptothecin cell
    proliferation inhibition; prodrug camptothecin cell proliferation
    inhibition
ΙT
    Macroglobulins
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (2 macroglobulin-serum; camptothecin or deriv., analog, metabolite, or
       prodrug thereof for inhibition of abnormal cell proliferation, and
       combinations including camptothecin)
    Angiogenic factors
ΙΤ
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (Ang-1, monoclonal antibodies to; camptothecin or deriv., analog,
       metabolite, or prodrug thereof for inhibition of abnormal cell
       proliferation, and combinations including camptothecin)
ΙT
    Angiogenic factors
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (Ang-2, monoclonal antibodies to; camptothecin or deriv., analog,
       metabolite, or prodrug thereof for inhibition of abnormal cell
       proliferation, and combinations including camptothecin)
ΙT
    Gene, animal
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
        (BRCA2; camptothecin or deriv., analog, metabolite, or prodrug thereof
        for inhibition of abnormal cell proliferation, and combinations
        including camptothecin)
    Gene, animal
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
        (BRCA; camptothecin or deriv., analog, metabolite, or prodrug thereof
        for inhibition of abnormal cell proliferation, and combinations
        including camptothecin)
IT
    Gene, animal
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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(DPC-4; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Papillomavirus

(E6 or E7 fragment; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Proteins, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(E6, papillomavirus, fragment; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Transcription factors

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(E7, papillomavirus, fragment; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(Ewing's sarcoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Hemocyanins

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(KLH; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(Kaposi's sarcoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gene, animal

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(NF-1; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gene, animal

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(NF-2; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Disease, animal

(Oster Webber syndrome; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gene, animal

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(RB1; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gene, animal

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
(Uses)

(TP53; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gene, animal

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(WT1; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(Wilms' tumor; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Kidney, neoplasm

(Wilms', inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Nerve, neoplasm

(acoustic neuroma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(acoustic neuroma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(adenocarcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Liver, neoplasm

(adenoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Immunostimulants

(adjuvants; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Sulfonates

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(alkyl alkone; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Steroids, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(angiostatic; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Nutrients

(anti-; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antiarteriosclerotics

(antiatherosclerotics; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Skin, neoplasm

(basal cell carcinoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

ΙT Antitumor agents

> (basal cell carcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

ΙΤ Biliary tract

> (bile duct, neoplasm, adenoma and cystanoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

TΥ Antitumor agents

> (bone; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

ΙT Antitumor agents

> (brain; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

Antitumor agents ΙT

> (bronchi; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

TT

Adenoma Adrenal gland, neoplasm Alkylating agents, biological Angiogenesis inhibitors Anti-ischemic agents Antibiotics Antiglaucoma agents Antirheumatic agents Antiserums Antitumor agents Calculi, biliary Carcinoid Cell Drug delivery systems Hyperplasia

Immunomodulators

Mycobacterium BCG

Pheochromocytoma

Polycythemia vera

Psoriasis

(camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

ΙT Carcinoembryonic antigen

Gangliosides

Interferons

Interleukin 12

Interleukin 2

Interleukin 4

Natural products

Prostate-specific antigen

.alpha.-Fetoproteins

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

ΤT Antitumor agents

(carcinoma, epidermoid; camptothecin or deriv., analog, metabolite, or

prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(carcinoma, medullary carcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Neoplasm

(cell; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(cervix carcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Uterus, neoplasm

(cervix, carcinoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Uterus, disease

(cervix, dysplasia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Intestine, neoplasm

(colon, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(colon; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eve

(cornea, hyperplastic corneal nerve tumor; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eve

(cornea, transplant; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Transplant and Transplantation

(cornea; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Transplant rejection

(corneal; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Brain

(cortex, cortical ischemia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eye, disease

(diabetic retinopathy; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Brain, disease

(edema, ischemic-reperfusion-related; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Uterus, disease

(endometriosis; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Lipopolysaccharides

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(endotoxin; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Toxins

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(endotoxins, lipopolysaccharides; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Neoplasm

(fibroma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Mycosis

(fungoides, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(gallbladder tumor inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Nerve, neoplasm

(ganglioneuroma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(giant cell tumor; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Neuroglia

(glioblastoma multiforme, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(glioblastoma multiforme; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Glycoproteins, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(gp100; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(hairy cell leukemia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(head; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Blood vessel, neoplasm

(hemangioma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(hemangioma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations

including camptothecin)

IT Liver, neoplasm

(hepatoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(hepatoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Hormones, animal, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (hormonal agents; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Neoplasm

(humoral hypercalcemia of malignancy; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Ovary, disease

(hyperplasia and hypervascularity; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Proteins, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(immunomodulating; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Bone, neoplasm

Brain, neoplasm

Kidney, neoplasm

Lung, neoplasm

Nerve, neoplasm

Ovary, neoplasm

Pancreas, neoplasm

Skin, neoplasm

Stomach, neoplasm

Thyroid gland, neoplasm

(inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Brain, disease

(injury, ischemic-reperfusion-related; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Ischemia

Reperfusion

(ischemic-reperfusion-related brain edema and injury; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(kidney; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(larynx tumor inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(leiomyoma inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Myoma

(leiomyoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Myoma

(leiomyoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(leukemia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Adipose tissue, neoplasm

(lipoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(lipoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(lung small-cell carcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(lung; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(lymphocytic leukemia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(lymphoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eye, disease

(macula, degeneration; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(mammary gland; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(marfanoid habitus tumor; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antigens

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(melanoma-assocd., MART-1; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(melanoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Mesothelium

(mesothelioma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(mesothelioma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(metastasis, skin carcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Angiogenic factors

Hepatocyte growth factor

RL: BSU (Biological study, unclassified); BIOL (Biological study) (monoclonal antibodies to; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antibodies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(monoclonal; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Skin, neoplasm

(mycosis fungoides, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(mycosis fungoides; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(myelogenous leukemia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(myeloma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(myxoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(neck; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Bronchi

Head

Mammary gland

Neck, anatomical

## Pancreatic islet of Langerhans

Prostate gland

(neoplasm, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Parathyroid gland

(neoplasm; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(nerve; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Nerve, neoplasm

(neuroblastoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(neuroblastoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Schwann cell

(neurofibroma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(neurofibroma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(neuroma inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Nerve, neoplasm

(neuroma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Bone, neoplasm

(osteosarcoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

Bone, neoplasm

(osteosarcoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(ovary; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(pancreas; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(pancreatic islet; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Ovary, disease

(polycystic; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Proliferation inhibition

(proliferation inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(prostate gland; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Granuloma

(pyogenic; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Intestine, neoplasm

(rectum, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and

combinations including camptothecin)

IT Antitumor agents

(rectum; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Artery, disease

(restenosis; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eye, neoplasm

(retinoblastoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(retinoblastoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eye, disease

(retrolental fibroplasia; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(rhabdomyosarcoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(sarcoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Testis, neoplasm

(seminoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(seminoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(skin; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Lung, neoplasm

(small-cell carcinoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(soft tissue sarcoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Animal tissue

(soft, sarcoma, inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(squamous cell carcinoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(stomach; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Peptidoglycans

Polysaccharides, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(sulfated polysaccharide peptidoglycan complex; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Protamines

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(sulfates; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Neoplasm

(teratoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(thyroid; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Eye, disease

(trachoma; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gallbladder

Larynx

(tumor inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Gene, animal

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(tumor suppressor; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study) (tumor-assocd., monoclonal antibodies to; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Vaccines

(tumor; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Antitumor agents

(vaccines; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Interferons

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(.alpha.; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT Interferons

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(.beta.; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations

including camptothecin)

IT Interferons

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(.gamma.; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

50-18-0, Cytoxan 50-35-1, Thalidomide 50-44-2, Mercaptopurine IT50-76-0, Dactinomycin 50-91-9, Floxuridine 51-21-8, Fluorouracil 52-67-5, D-Penicillamine 56-53-1, Diethylstilbestrol 57-22-7, Vincristine 58-05-9, Leucovorin 59-05-2, Methotrexate 76-43-7, Fluoxymesterone 125-84-8, Aminoglutethimide 127-07-1, Hydroxyurea 145-63-1, Suramin 147-94-4, Cytarabine 151-56-4D, Aziridine, derivs., biological studies 154-42-7, Thioguanine 302-79-4, Retinoic acid 334-22-5D, derivs. 362-07-2, 2-Methoxyestradiol 366-18-7, 2,2'-Bipyridine 444-27-9, Thiaproline 595-33-5, Megestrol acetate 618-27-9, cis-Hydroxyproline 865-21-4, Vinblastine 1119-28-4, .beta.-Aminopropionitrile fumarate 1398-61-4D, Chitin, sulfated derivs. 1404-00-8, Mitomycin 2133-34-8, L-Azetidine-2-carboxylic acid 3395-35-5, D,L-3,4-Dehydroproline 4291-63-8, Cladribine 7440-06-4D, Platinum, compds., biological studies 7689-03-4, 20(S)-Camptothecin 7689-03-4D, 20(S)-Camptothecin, analogs, derivs., metabolites, and prodrugs 9005-49-6, Heparin, biological studies 9015-68-3, Asparaginase 9076-44-2, Chymostatin 10540-29-1, Tamoxifen 11056-06-7, Bleomycin 11096-26-7, Erythropoietin 12244-57-4 13010-20-3D, Nitrosourea, derivs. 13311-84-7, Flutamide 14769-73-4, Levamisole 18378-89-7, Plicamycin 20830-81-3, Daunorubicin 23110-15-8, Fumagillin 23214-92-8, Doxorubicin 27988-97-2, Tetrazole 29767-20-2, Teniposide 33069-62-4, Paclitaxel 33419-42-0, Etoposide 34913-17-2 **37270-94-3**, Platelet factor 4 53643-48-4, Vindesine 53714-56-0, Leuprolide 53910-25-1, Pentostatin 56420-45-2, Epirubicin 58957-92-9, Idarubicin 62996-74-1, Staurosporine 63612-50-0, Nilutamide 64808-48-6, Lobenzarit disodium 65271-80-9, Mitoxantrone 65277-42-1, Ketoconazole 67699-40-5, Vinzolidine 71486-22-1, Vinorelbine 75607-67-9, Fludarabine phosphate 78186-34-2, Bisantrene 83150-76-9, Octreotide 83869-56-1, GM-CSF 84371-65-3, Mifepristone 84449-90-1, Raloxifene 86090-08-6, Angiostatin 89778-26-7, Toremifene 90357-06-5, Bicalutamide 91421-42-0, 9-Nitro-20(S)-camptothecin 91421-43-1, 9-Amino-20(S)-camptothecin 95058-81-4, Gemcitabine 108121-76-2, Anthracenedione 110124-55-5 114977-28-5, Docetaxel 121369-51-5, .beta.-Cyclodextrin tetradecasulfate 124861-55-8, TIMP-2 126509-46-4, Eponemycin 138757-15-0, .alpha.2-Antiplasmin 140208-23-7, 140208-24-8, TIMP-1 142243-03-6, Proteinase inhibitor PAI-2 143011-72-7, G-CSF 145781-92-6, Goserelin acetate 148717-90-2, 174722-31-7, Rituxan 180288-69-1, Herceptin 187888-07-9, 371171-68-5, Chimp 3 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT 81669-70-7, Metalloproteinase

RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin)

IT 106096-92-8, Acidic fibroblast growth factor 106096-93-9
, Basic fibroblast growth factor 129653-64-1, Fibroblast growth factor 5
188417-84-7, Vascular endothelial growth factor C
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(monoclonal antibodies to; camptothecin or deriv., analog, metabolite,

or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin) ΙT 9001-12-1, Collagenase RL: BSU (Biological study, unclassified); BIOL (Biological study) (.beta.-1-anticollagenase-serum; camptothecin or deriv., analog, metabolite, or prodrug thereof for inhibition of abnormal cell proliferation, and combinations including camptothecin) ANSWER 3 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65 ΑN 2001:416778 HCAPLUS DN 135:24733 ΤI Pancreatic stem cells and their use in transplantation Abraham, Elizabeth J.; Faustman, Denise; Habener, Joel L.; Vallejo, Mario; ΤN Zulewski, Hendrik PΑ General Hospital Corporation, USA PCT Int. Appl., 102 pp. SO CODEN: PIXXD2 DT Patent LA English ICM A61K035-00 ΙC ICS C12N015-85 63-7 (Pharmaceuticals) Section cross-reference(s): 1, 2, 15 FAN.CNT 2 PATENT NO. KIND DATE APPLICATION NO. DATE ----- -----\_\_\_\_\_\_ A1 20010607 W0 2000-US33031 20001206 <--WO 2001039784 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG US 2000-731255 20001206 <--EP 2000-980985 20001206 <--US 2001024824 Α1 20010927 EP 1257282 Α1 20021120 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL PRAI US 1999-169082P P 19991206 <--US 2000-215109P P 20000628 US 2000-238880P P 20001006 WO 2000-US33031 W 20001206 AΒ Methods and compns. are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions in a patient using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Addnl., the patient may be treated with an immunosuppressant agent. Nestin has been identified as a mol. marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-pos. stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin -secreting cells or other cells. For example, a 3-fold stimulation of nestin mRNA levels in the islets cultured in high glucose compared to the islets cultured in normal glucose was obsd. Similarly, injection of

glucagon-like peptide 1 (GLP-1) into mice was found to increase islet mass

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by 2-fold in 48 h.
     pancreas stem cell culture transplant diabetes immunosuppressant
ST
TΤ
     Keratins
     RL: BPR (Biological process); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
        (19; isolation, culture, and transplantation of pancreatic
        stem cells for diabetes treatment)
ΙT
     Transcription factors
     RL: BAC (Biological activity or effector, except adverse); BPR (Biological
     process); BSU (Biological study, unclassified); BIOL (Biological study);
     PROC (Process)
        (IDX-1 (islet duodenum homeobox-1); isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
TT
     Nucleic acids
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BIOL (Biological study)
        (IDX-1-encoding; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells for diabetes treatment)
ΙΤ
     Histocompatibility antigens
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (MHC (major histocompatibility complex), class I; differentiation of
        pancreatic stem cells that not express MHC antigens for diabetes
        treatment)
     Histocompatibility antigens
ΤТ
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (MHC (major histocompatibility complex), class II; differentiation of
        pancreatic stem cells that not express MHC antigens for diabetes
        treatment)
ΙΤ
     Transplant and Transplantation
        (allotransplant, pancreas; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
ΤŢ
     Pancreas
        (allotransplant; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
TT
     Transplant and Transplantation
        (graft-vs.-host reaction;
        isolation, culture, and transplantation of nestin-pos.
       pancreatic stem cells for diabetes treatment)
    Liver
ΙT
        (hepatocyte; differentiation of pancreatic stem cells into hepatocyte)
IT
    Liver
        (identification of nestin-pos. pancreatic stem cells in liver)
    Cell differentiation
TT
        (inducers; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells for diabetes treatment)
TΨ
     Drug delivery systems
        (injections, endoscopic retrograde; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
IT
     Diabetes mellitus
        (insulin-dependent; isolation, culture, and
        transplantation of pancreatic stem cells for diabetes
        treatment)
    Animal tissue culture
TT
    Antidiabetic agents
    Cell differentiation
    Cell proliferation
     Immunosuppressants
     Rat
     Swine
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Transplant rejection

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(isolation, culture, and transplantation of nestin-pos.
        pancreatic stem cells for diabetes treatment)
ΤТ
     Hepatocyte growth factor
     Lymphotoxin
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BIOL (Biological study)
        (isolation, culture, and transplantation of nestin-pos.
        pancreatic stem cells for diabetes treatment)
ΙT
     Proteins, specific or class
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (nestins; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells for diabetes treatment)
     Transplant and Transplantation
ΤТ
        (pancreas; isolation, culture, and transplantation
        of nestin-pos. pancreatic stem cells for diabetes treatment)
ΙT
        (stem cell; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells but not neural stem cells for
        diabetes treatment)
ΙT
        (stem cell; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells for diabetes treatment)
TT
     Antibodies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (to GAD65; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells and immunosuppressants for diabetes
        treatment)
ΤТ
     Pancreas
        (transplant; isolation, culture, and transplantation
        of nestin-pos. pancreatic stem cells for diabetes treatment)
     Collagens, biological studies
IT
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (type IV, antibodies against, labeled; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
TΨ
     Kidney
        (xenogeneic transplantation of pancreatic stem cells into
        kidney)
     Transplant and Transplantation
TΥ
        (xenotransplant, pancreas; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
     Pancreatic islet of Langerhans
ΙT
        (.alpha.-cell; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
     Pancreatic islet of Langerhans
TT
        (.beta.-cell; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
IT
     9024-58-2, Glutamate decarboxylase
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (antibodies to; isolation, culture, and transplantation of
        nestin-pos. pancreatic stem cells and immunosuppressants for diabetes
        treatment)
     11028-71-0, Concanavalin A
ΙΤ
     RL: NUU (Other use, unclassified); USES (Uses)
        (culture vessel coated with; isolation, culture, and
        transplantation of nestin-pos. pancreatic stem cells for
        diabetes treatment)
                              104987-11-3, FK 506
     79217-60-0, Cyclosporin
IΤ
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
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(isolation, culture, and transplantation of nestin-pos. pancreatic stem cells and immunosuppressants for diabetes treatment) ΙT 50-99-7, D-Glucose, biological studies 4449-51-8, Cyclopamine 62229-50-9, Epidermal growth factor 89750-14-1, Glucagon-like peptide I 104625-48-1, activin A 106096-93-9, fibroblast growth factor 2 141732-76-5, exendin 4 148348-15-6, Fibroblast growth factor 7 163150-12-7, Betacellulin RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment) RE.CNT THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD (1) Beattie, G; J Clin Endocrin Met 1994, V78(5), P1232 HCAPLUS (2) Cornelius, J; Horm Met Res 1997, V29(6), P271 HCAPLUS (3) Hunziker, E; Biochem Biophys Res Comm 2000, V271(1), P116 HCAPLUS (4) Yasumizu, R; Proc Natl Acad Sci 1987, V84(18), P6555 MEDLINE ANSWER 4 OF 49 HCAPLUS COPYRIGHT 2002 ACS 2001:34737 HCAPLUS ΑN DN 134:235321 Fibroblast growth factors are required for efficient tumor angiogenesis TΙ Compagni, Amelia; Wilgenbus, Petra; Impagnatiello, Maria-Antonietta; ΑU Cotten, Matt; Christofori, Gerhard CS Research Institute of Molecular Pathology, Vienna, A-1030, Austria Cancer Research (2000), 60(24), 7163-7169 SO CODEN: CNREA8; ISSN: 0008-5472 American Association for Cancer Research DT Journal English LA 14-1 (Mammalian Pathological Biochemistry) CC Section cross-reference(s): 2 Although the function of vascular endothelial growth factor in the AΒ induction of tumor angiogenesis is well understood, the role of a second group of angiogenic factors, the fibroblast growth factors (FGFs), remains elusive. We used a recombinant adenovirus expressing sol. FGF receptor (AdsFGFR) to interfere with FGF function in tumor angiogenesis. AdsFGFR repressed endothelial cell proliferation in vitro and inhibited tumor angiogenesis in an ex vivo bioassay, in which endothelial cells were cocultured with angiogenic tumor biopsies in a collagen gel. Moreover, AdsFGFR repressed tumor angiogenesis and hence tumor growth in vivo in allograft transplantation expts. Whereas adenoviral expression of a sol. form of VEGF receptor 1 (AdsFlt) predominantly affected the initiation of tumor angiogenesis, sol. FGF receptor (sFGFR) appeared to impair the maintenance of tumor angiogenesis. The combination of sFGFR and sol. Flt exhibited a synergistic effect in the repression of tumor growth. Finally, i.v. injection of AdsFGFR resulted in a dramatic repression of tumor growth in a transgenic mouse model of pancreatic .beta. cell carcinogenesis. Similar to control infections with AdsFlt, tumor-assocd. vessel d. was decreased, indicating that the expression of sFGFR impaired tumor angiogenesis. These data indicate that FGFs play a crit. role in tumor angiogenesis. ST FGF receptor tumor angiogenesis ΙT Angiogenesis Cell proliferation Transformation, neoplastic (fibroblast growth factors are required for efficient tumor angiogenesis) ΤТ Fibroblast growth factor receptors RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(fibroblast growth factors are required for efficient tumor

angiogenesis) ΤТ Vascular endothelial growth factor receptors RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (gene flt 1; fibroblast growth factors are required for efficient tumor angiogenesis) ΙT Pancreatic islet of Langerhans (neoplasm; fibroblast growth factors are required for efficient tumor angiogenesis) ΙΤ Pancreas, neoplasm (.beta.-cell tumors; fibroblast growth factors are required for efficient tumor angiogenesis) IT 106096-92-8 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process) (fibroblast growth factors are required for efficient tumor angiogenesis) 127464-60-2, Vascular endothelial growth factor TT RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (fibroblast growth factors are required for efficient tumor angiogenesis) RE.CNT THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD RF. (1) Aiello, L; Proc Natl Acad Sci USA 1995, V92, P10457 HCAPLUS (2) Baatout, S; Anticancer Res 1997, V17, P451 MEDLINE (3) Basilico, C; Adv Cancer Res 1992, V59, P115 HCAPLUS (4) Bergers, G; Nat Cell Biol 2000, V2, P737 HCAPLUS (5) Bergers, G; Science (Washington DC) 1999, V284, P808 HCAPLUS (6) Celli, G; EMBO J 1998, V17, P1642 HCAPLUS (7) Chartier, C; J Virol 1996, V70, P4805 HCAPLUS (8) Christofori, G; Angiogenesis 1997, V1, P55 HCAPLUS (9) Christofori, G; Mol Endocrinol 1995, V9, P1760 HCAPLUS (10) Christofori, G; Tumor Progression and Angiogenesis 1997, P201 HCAPLUS (11) Cotten, M; Adenovirus Polylysine DNA Conjugates 1996, P12.3.1 (12) Dong, Q; Arterioscler Thromb Vasc Biol 1997, V17, P1599 HCAPLUS (13) Ferrara, N; J Mol Med 1999, V77, P527 HCAPLUS (14) Ferrara, N; Nat Med 1998, V4, P336 HCAPLUS (15) Folkman, J; J Natl Cancer Inst 1990, V82, P4 MEDLINE (16) Folkman, J; Nat Med 1995, V1, P27 HCAPLUS (17) Folkman, J; Nature (Lond) 1989, V339, P58 MEDLINE (18) Goldman, C; Proc Natl Acad Sci USA 1998, V95, P8795 HCAPLUS (19) Goto, F; Lab Invest 1993, V69, P508 HCAPLUS (20) Hanahan, D; Nature (Lond) 1985, V315, P115 HCAPLUS (21) Hori, A; Cancer Res 1991, V51, P6180 HCAPLUS (22) Kandel, J; Cell 1991, V66, P1095 HCAPLUS (23) Kong, H; Hum Gene Ther 1998, V9, P823 HCAPLUS (24) Lin, P; Cell Growth Differ 1998, V9, P49 HCAPLUS (25) Lin, P; Proc Natl Acad Sci USA 1998, V95, P8829 HCAPLUS (26) Maciag, T; Important Adv Oncol 1990, P85 MEDLINE (27) Michou, A; J Virol 1999, V73, P1399 HCAPLUS (28) Naik, P; Genes Dev 1996, V10, P2105 HCAPLUS (29) Nguyen, M; J Natl Cancer Inst 1994, V86, P356 MEDLINE (30) Olson, D; Cell Growth Differ 1998, V9, P557 HCAPLUS (31) Parangi, S; Proc Natl Acad Sci USA 1996, V93, P2002 HCAPLUS (32) Pepper, M; Biochem Biophys Res Commun 1992, V189, P824 HCAPLUS

(34) Perl, A; Nature (Lond) 1998, V392, P190 HCAPLUS (35) Radvanyi, F; Mol Cell Biol 1993, V13, P4223 HCAPLUS (36) Risau, W; Nature (Lond) 1997, V386, P671 MEDLINE

(33) Pepper, M; Exp Cell Res 1998, V241, P414 HCAPLUS

(37) Seghezzi, G; J Cell Biol 1998, V141, P1659 HCAPLUS

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(38) Shing, Y; Science (Washington DC) 1993, V259, P1604 HCAPLUS
(39) Takayama, K; Cancer Res 2000, V60, P2169 HCAPLUS
(40) Teitelman, G; Cell 1988, V52, P97 HCAPLUS
(41) Wang, Y; Nat Med 1997, V3, P887 HCAPLUS
(42) Weidner, N; Important Adv Oncol 1996, P167 MEDLINE
    ANSWER 5 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
ΑN
    2000:842288 HCAPLUS
DN
    134:16530
ТΙ
    Methods to inhibit infectious agent transmission during
    xenotransplantation with fusion protein-encoding DNA
ΙN
     Federspiel, Mark J.
    Mayo Medical Ventures, USA
PA
SO
    PCT Int. Appl., 144 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
IC
    ICM C12N015-48
         C12N015-62; C07K014-15; C07K019-00; A61K048-00; C12Q001-68;
    ICS
         C07K016-10; C12N007-01
    15-2 (Immunochemistry)
CC
     Section cross-reference(s): 3
FAN.CNT 1
                     KIND DATE
                                          APPLICATION NO. DATE
    PATENT NO.
     ______
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    WO 2000071726
                    A1
                           20001130
                                          WO 2000-US14296 20000524 <--
PΙ
    WO 2000071726
                     C2
                           20020627
            AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
            CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
            ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
            LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE,
            SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,
             ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
            CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1999-135631P P
                           19990524
                                     <--
    The invention provides nucleic acid mols., compns. and methods to inhibit
    or prevent infectious agent transmission from donor to recipient or
    recipient to donor during or after transplant. The nucleic
    acids encode a fusion protein comprising a protein of the infectious agent
    and a degradative enzyme. For example, the infectious agent may be a
    virus such as pig endogenous retrovirus; the infectious agent protein may
    be a viral capsid protein, env glycoprotein, or accessory protein such as
    Vpr, Vif, and Nef; and the degradative enzyme may be a nuclease or
    protease. Thus, a gene encoding an avian leukosis virus (ALV) receptor
    protein fused to IgG was delivered and expressed by ALV-based retroviral
    vectors both in cultured cells and in chickens. The fusion protein
    significantly inhibited ALV infection in vitro and in vivo. The antiviral
    effect was specific for ALV, consistent with a receptor interference
    mechanism.
ST
    virus transmission xenotransplantation viral protein nuclease
    protease fusion
ΙT
    Proteins, specific or class
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
        (Vif, fusion proteins; methods to inhibit infectious agent transmission
        during xenotransplantation with fusion protein-encoding DNA)
TT
     Proteins, specific or class
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
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(Vpx, fusion proteins; methods to inhibit infectious agent transmission

during xenotransplantation with fusion protein-encoding DNA)

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Antibodies
ΤТ
     RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
        (anti-pig endogenous retrovirus; methods to inhibit infectious agent
        transmission during xenotransplantation with fusion
        protein-encoding DNA)
ΙŢ
     Proteins, specific or class
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
        (capsid, fusion proteins; methods to inhibit infectious agent
        transmission during xenotransplantation with fusion
        protein-encoding DNA)
ΙT
     Kidney
     Liver
     Pancreas
        (cell, transplantation of; methods to inhibit infectious
        agent transmission during xenotransplantation with fusion
        protein-encoding DNA)
ΙT
     Probes (nucleic acid)
     RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical
     study); USES (Uses)
        (for detection of pig endogenous retrovirus; methods to inhibit
        infectious agent transmission during xenotransplantation with
        fusion protein-encoding DNA)
ΙT
     Envelope proteins
     nef protein
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
        (fusion proteins; methods to inhibit infectious agent transmission
        during xenotransplantation with fusion protein-encoding DNA)
     Proteins, specific or class
TΤ
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
        (gene vpr, fusion proteins; methods to inhibit infectious agent
        transmission during xenotransplantation with fusion
        protein-encoding DNA)
     Blood cell
ΤT
        (human, recombinant; methods to inhibit infectious agent transmission
        during xenotransplantation with fusion protein-encoding DNA)
IT
     Avian leukosis virus
     Cytomegalovirus
     Hepatitis virus
     Herpesviridae
     Human herpesvirus
     Human herpesvirus 4
     Human immunodeficiency virus
     Lentivirus
     Porcine endogenous retrovirus
     Retroviridae
        (infection by; methods to inhibit infectious agent transmission during
        xenotransplantation with fusion protein-encoding DNA)
TT
     Nerve
        (neuron, transplantation of; methods to inhibit infectious
        agent transmission during xenotransplantation with fusion
        protein-encoding DNA)
ΙT
     cDNA sequences
        (of pig endogenous retrovirus)
IT
     Infection
        (prevention of; methods to inhibit infectious agent transmission during
        xenotransplantation with fusion protein-encoding DNA)
IT
     Cell
        (recombinant, fusion protein-producing; methods to inhibit infectious
        agent transmission during xenotransplantation with fusion
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protein-encoding DNA)

ТΤ Organ, animal (recombinant; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) IΤ Embryo, animal (stem cell, transplantation of; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) ΙΤ Animal cell (swine, recombinant; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) ТΥ Heart Kidney Liver Pancreatic islet of Langerhans (transplantation of; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) ΙT Transplant and Transplantation (xenotransplant; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) ΙT 257859-25-9 RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses) (amino acid sequence; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) 9001-62-1D, Lipase, fusion protein 9001-92-7D, Proteinase, fusion protein 9001-99-4D, Ribonuclease, fusion protein 9026-12-4D. Barnase, fusion protein 9026-81-7D, Nuclease, fusion protein 9050-76-4D, Ribonuclease H, fusion protein RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) 309306-85-2 247227-95-8 309306-82-9 309306-83-0 309306-84-1 ТТ 309306-86-3 309306-87-4 RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses) (nucleotide sequence; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) ΙT 216579-24-7 216579-31-6 216579-35-0 216579-40-7 309307-53-7, 1: PN: WO0071726 SEQID: 1 unclaimed DNA 309307-54-8, 2: PN: WO0071726 SEOID: 2 unclaimed DNA 309307-55-9, 6: PN: WO0071726 SEQID: 6 unclaimed 309307-56-0, 7: PN: W00071726 SEQID: 7 unclaimed DNA 309307-57-1 309307-58-2 309307-59-3 309307-60-6 309307-61-7 309307-62-8 309307-66-2 309307-63-9 309307-64-0 309307-65-1 309307-67-3 309307-70-8 309307-68-4 309307-69-5 RL: PRP (Properties) (unclaimed nucleotide sequence; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) ΙT 198785-81-8 208129-24-2 RL: PRP (Properties) (unclaimed protein sequence; methods to inhibit infectious agent transmission during xenotransplantation with fusion protein-encoding DNA) THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT RE (1) Akiyoshi, D; JOURNAL OF VIROLOGY 1998, V72(5), P4503 HCAPLUS (2) Medical Res Council; WO 9853104 A 1998 HCAPLUS (3) Natsoulis, G; NATURE 1991, V352(6336), P632 HCAPLUS (4) Patience, C; NATURE MEDICINE 1997, V3(3), P282 HCAPLUS

(5) Sun, L; PROC NATL ACAD SCI USA 1994, V91, P9715 HCAPLUS

- (6) Univ Alabama Res Found; WO 9632494 A 1996 HCAPLUS
- (7) Vanbrocklin, M; JOURNAL OF VIROLOGY 1997, V71(4), P3312 HCAPLUS
- L65 ANSWER 6 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- AN 2000:769087 HCAPLUS
- DN 133:329580
- TI Use of rosmarinic acid and derivatives thereof as immunosuppressants or inhibitors of SH2-mediated processes
- IN Hur, Eun Mi; Choi, Young Bong; Park, Changwon; Lee, Jongsung; Park, Dongsu; Yun, Yungdae; Lee, Keun Hyeung; Oh, Jong-Eun; Ahn, Soon Choul; Lee, Hyun Sun; Ahn, Jong Sok; Jung, Soo Il
- PA Mogam Biotechnology Research Institute, S. Korea
- SO U.S., 19 pp. CODEN: USXXAM
- DT Patent
- LA English
- IC ICM A61K031-235
- NCL 514533000
- CC 1-7 (Pharmacology)

Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
		<del>-</del>					
ΡI	US 6140363	А	20001031		US 1999-312405	19990514 <	
	JP 2002526384	Т2	20020820		JP 2000-549270	19990512 <	
PRAI	KR 1998-17741	A	19980516	<			
	KR 1999-15989	Α	19990504	<			
	WO 1999-KR232	W	19990512	<			

- AB The invention discloses the use of rosmarinic acid and/or derivs. thereof as immunosuppressive agents and/or inhibitors of SH2 domain function. Rosmarinic acid and derivs. thereof specifically inhibit the binding of ligand peptides to Lck SH2 domain, disturb the Lck-mediated signal transduction in T cells, also inhibit cytokine gene expression, and suppress immune responses in the transplanted tissue. These activities of rosmarinic acid and derivs. thereof support their applicability to treatment, prevention and/or diagnosis of graft rejection, graft-vs.-host disease, autoimmune diseases, inflammatory diseases, etc.
- ST rosmarinic acid deriv prepn immunosuppressant; Lck SH2 domain inhibition rosmarinic acid
- IT Antibodies
  - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(OKT-3; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)  $\,$ 

IT Protein motifs

(SH2 domain; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)

IT Cytotoxic agents

(T-cell; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)

IT Antiserums

(anti-lymphocyte/thymocyte; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)

IT Interleukin 2 receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (antibodies to; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)

IT Lymphocyte

(antisera to; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)

IT Immunoglobulins

kwon - 09 / 890936 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (antithymocyte globulins; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Transplant and Transplantation Transplant and Transplantation (bone marrow; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Muscle, disease (breakdown; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Musculoskeletal diseases Musculoskeletal diseases (cartilage, increased absorption; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Eye Eye (cornea, transplant; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Transplant and Transplantation (cornea; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Gene, animal RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (cytokine; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Cartilage Cartilage (disease, increased absorption; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Joint, anatomical (disease, joint destruction; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Adipose tissue (elevated fat level; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Gene (expression, cytokine; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Cytokines RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (genes, expression; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Transplant and Transplantation (graft-vs.-host reaction; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Transplant and Transplantation (heart valve; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Transplant and Transplantation Transplant and Transplantation (heart; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Transplant and Transplantation Transplant and Transplantation (kidney; rosmarinic acid and derivs. as immunosuppressants

ΤT

ΙT

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Antitumor agents (leukemia; rosmarinic acid and derivs. as immunosuppressants and

and inhibitors of SH2-mediated processes)

inhibitors of SH2-mediated processes) TT Transplant and Transplantation Transplant and Transplantation (liver; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΙT Transplant and Transplantation Transplant and Transplantation (lung; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΙT Transplant and Transplantation Transplant and Transplantation (pancreas; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΤТ Transplant and Transplantation Transplant and Transplantation (pancreatic islet; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΙT Proliferation inhibition (proliferation inhibitors, T-cell; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΤT Anti-AIDS agents Anti-Alzheimer's agents Anti-infective agents Antiarteriosclerotics Anticoaqulants Antidiabetic agents Antirheumatic agents Autoimmune disease Diagnosis Hepatitis Human immunodeficiency virus Immunosuppressants Lupus erythematosus Meningitis Myasthenia gravis Prunella vulgaris Psoriasis Signal transduction, biological T cell (lymphocyte) Transplant rejection (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) Corticosteroids, biological studies TΤ RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΙT Interleukin 1.beta. Interleukin 2 Interleukin 4 Interleukin 6 TCR (T cell receptors) RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΙT Transplant and Transplantation Transplant and Transplantation (skin; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes)

ΙT

Transplant and Transplantation

(small intestine; rosmarinic acid and derivs. as

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immunosuppressants and inhibitors of SH2-mediated processes)
ΙT
    Intestine
     Intestine
        (small, transplant; rosmarinic acid and derivs. as
        immunosuppressants and inhibitors of SH2-mediated processes)
ΙT
     Drug interactions
        (synergistic; rosmarinic acid and derivs. as immunosuppressants and
        inhibitors of SH2-mediated processes)
ΙT
    Multiple sclerosis
        (therapeutic agents; rosmarinic acid and derivs. as immunosuppressants
        and inhibitors of SH2-mediated processes)
ΙT
     Thymus gland
        (thymocyte, antisera to; rosmarinic acid and derivs. as
        immunosuppressants and inhibitors of SH2-mediated processes)
ΤТ
     Bone marrow
    Bone marrow
    Heart
    Heart
    Kidnev
    Kidney
    Liver
    Liver
    Lung
    Lung
     Pancreas
     Pancreas
       Pancreatic islet of Langerhans
       Pancreatic islet of Langerhans
     Skin
     Skin
        (transplant; rosmarinic acid and derivs. as
        immunosuppressants and inhibitors of SH2-mediated processes)
TT
     Heart
    Heart
        (valve, transplant; rosmarinic acid and derivs. as
        immunosuppressants and inhibitors of SH2-mediated processes)
TT
     Interferons
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (.gamma.; rosmarinic acid and derivs. as immunosuppressants and
        inhibitors of SH2-mediated processes)
     114051-78-4, Lck kinase
TΤ
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (SH2 domain; rosmarinic acid and derivs. as immunosuppressants and
        inhibitors of SH2-mediated processes)
ΙΤ
     179188-11-5P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (osmarinic acid and derivs. as immunosuppressants and inhibitors of
        SH2-mediated processes)
ΙT
     32483-30-0P
                   42085-50-7P
                                  136749-43-4P
                                                 203118-25-6P
                                                                 203118-32-5P
     303175-71-5P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (prepn. and reaction; rosmarinic acid and derivs. as immunosuppressants
        and inhibitors of SH2-mediated processes)
ΙT
     60-18-4, (S)-Tyrosine, reactions 64-17-5, Ethanol, reactions
     Isopropyl alcohol, reactions 75-36-5, Acetyl chloride bromide, reactions 331-39-5, Caffeic acid 69739-34-0
                                                                106-95-6, Allvl
     bromide, reactions
                                                     69739-34-0,
     tert-Butyldimethylsilyl triflate
     RL: RCT (Reactant); RACT (Reactant or reagent)
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(reaction; rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) 154447-36-6, LY294002 TΤ RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) 179462-74-9P, .+-.-Rosmarinic acid ΙT RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) 303175-68-0P 303175-69-1P TT 118120-95-9P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) 50-18-0, Cyclophosphamide 59-05-2, Methotrexate 446-86-6, Azathioprine ΤT 24280-93-1, Mycophenolic acid 50924-49-7, Mizoribine 53123-88-9, 59122-46-2, Misoprostol 59865-13-3, Cyclosporin A 59865-13-3D, Cyclosporin A, derivs. 75706-12-6, Leflunomide 104987-11-3, FK-506 89149-10-0, 15-Deoxyspergualin 104987-11-3D, FK-506, derivs. 128794-94-5 179462-74-9D, .+-.~Rosmarinic acid, RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΙΤ 7440-70-2, Calcium, biological studies 303175-72-6 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (rosmarinic acid and derivs. as immunosuppressants and inhibitors of SH2-mediated processes) ΤТ 304488-47-9, 1: PN: US6140363 SEQID: 1 unclaimed DNA 304488-48-0, 2: PN: US6140363 SEQID: 2 unclaimed DNA 304488-49-1, 3: PN: US6140363 SEQID: 3 304488-50-4, 4: PN: US6140363 SEQID: 4 unclaimed DNA unclaimed DNA 304488-52-6, 6: PN: 304488-51-5, 5: PN: US6140363 SEQID: 5 unclaimed DNA US6140363 SEQID: 6 unclaimed DNA 304488-53-7, 7: PN: US6140363 SEQID: 7 unclaimed DNA 304488-54-8, 8: PN: US6140363 SEQID: 8 unclaimed DNA 304488-55-9, 9: PN: US6140363 SEQID: 9 unclaimed DNA 304488-56-0 304488-58-2 304488-57-1 RL: PRP (Properties) (unclaimed nucleotide sequence; use of rosmarinic acid and derivs. thereof as immunosuppressants or inhibitors of SH2-mediated processes) RE.CNT THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD RF. (1) Christ; US 4354035 1982 HCAPLUS (2) Wirtz-Peitz; US 4358442 1982 HCAPLUS (3) Zenk; US 4329361 1982 HCAPLUS ANSWER 7 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65 2000:725482 HCAPLUS ΑN 133:276356 DN TΙ Use of ErbB receptor ligands in treating diabetes Huang, Xiaojian; Stewart, Timothy Andrew ΙN Genentech, Inc., USA .PA

DTPatent

PCT Int. Appl., 48 pp.

CODEN: PIXXD2

SO

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LA
    English
TC
     ICM A61K038-00
CC
     1-10 (Pharmacology)
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
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    WO 2000059525 A2 20001012
WO 2000059525 A3 20010208
                           20001012
                                          WO 2000-US9240 20000405 <--
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                           20021203
                                          JP 2000-609088 20000405 <--
                          19990406 <--
PRAI US 1999-128017P P
    WO 2000-US9240
                           20000405
                     W
    The invention provides methods for treating pancreatic dysfunction,
AΒ
    particularly diabetes, in mammals using ErbB receptor ligands, such as
    heregulin, betacellulin, and EGF. Methods of treating such conditions
    using anti-ErbB receptor agonist antibodies are further provided. The
    methods of the invention may be performed by direct administration of such
    therapeutically useful agents to mammals, or alternatively, by exposing
    certain pancreatic cell types to such agents in vitro and subsequently
    transplanting the treated cells to a mammal.
    ErbB receptor ligand treatment diabetes; pancreas disfunction treatment
ST
    heregulin betacellulin EGF; antibody ErbB receptor agonist antidiabetic;
     transplantation pancreas ErbB receptor ligand
IT
    Transplant and Transplantation
      Transplant and Transplantation
        (allotransplant, pancreas; use of ErbB receptor
        ligands in treating diabetes)
ΙT
        (allotransplant; use of ErbB receptor ligands in treating
       diabetes)
IT
    Medical goods
        (cannulas; use of ErbB receptor ligands in treating diabetes)
ΙT
    Pancreas, disease
        (dysfunction; use of ErbB receptor ligands in treating diabetes)
ΙT
    Ligands
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (for ErbB receptor; use of ErbB receptor ligands in treating diabetes)
    Gene, animal
TT
    RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
    BIOL (Biological study); OCCU (Occurrence)
        (for heregulin or ErbB2 or ErbB3, mice heterozygous for; use of ErbB
        receptor ligands in treating diabetes)
TΤ
    Diabetes mellitus
        (insulin-dependent; use of ErbB receptor ligands in treating
        diabetes)
TT
    Epidermal growth factor receptors
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (ligands; use of ErbB receptor ligands in treating diabetes)
```

```
ΙT
     Transplant and Transplantation
       Transplant and Transplantation
        (pancreatic islet; use of ErbB receptor ligands in
        treating diabetes)
ΙT
     Antibodies
     RL: BPR (Biological process); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
        (to ErbB receptor agonists; use of ErbB receptor ligands in treating
ΙΤ
     Pancreatic islet of Langerhans
       Pancreatic islet of Langerhans
        (transplant; use of ErbB receptor ligands in treating
        diabetes)
ΤТ
     Diabetes mellitus
     Drug delivery systems
     Immunosuppressants
     Immunotherapy
     Mammal (Mammalia)
        (use of ErbB receptor ligands in treating diabetes)
ΤT
    Heregulins
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
        (use of ErbB receptor ligands in treating diabetes)
ΤT
     Transforming growth factors
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (.alpha.-; use of ErbB receptor ligands in treating diabetes)
ΙT
     Pancreatic islet of Langerhans
        (.beta.-cell; use of ErbB receptor ligands in
        treating diabetes)
ΙT
     62229-50-9, EGF
                      117147-70-3, Amphiregulin 154531-34-7
     163150-12-7, Betacellulin
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (use of ErbB receptor ligands in treating diabetes)
L65 ANSWER 8 OF 49 HCAPLUS COPYRIGHT 2002 ACS
ΑN
    2000:573837 HCAPLUS
DN
    133:191991
    Humanized immunoglobulin reactive with B7 molecules and methods of
TΙ
     treatment therewith
    Co, Man Sung; Vasquez, Maximiliano; Carreno, Beatriz; Celniker, Abbie
ΙN
    Cheryl; Collins, Mary; Goldman, Samuel; Gray, Gary S.; Knight, Andrea;
     O'Hara, Denise; Rup, Bonita; Veldman, Geertruida M.
PA
     Genetics Institute, Inc., USA
SO
     PCT Int. Appl., 162 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
     ICM C07K016-28
TC
         C12N005-10; C12N015-62; C12N015-13; G01N033-68; G01N033-577;
          A61K039-395; A61K035-12; A61P035-00; A61P007-06; A61P003-00;
          A61P037-00; A61P025-00; A61P001-18; A61P019-02; A61P001-00;
         A61P017-00; A61K039-505; A61K038-13; A61K031-445
     15-3 (Immunochemistry)
CC
     Section cross-reference(s): 3
FAN.CNT 1
                                          APPLICATION NO. DATE
     PATENT NO.
                    KIND DATE
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                                          _____
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    WO 2000047625 A2 20000817
                                          WO 2000-US3303 20000209 <--
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PΙ

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WO 2000047625
                            20010802
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            AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
            CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
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                                                            19990212 <--
    EP 1159300
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                            20011205
                                           EP 2000-919275
                                                            20000209 <--
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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     BR 2000008209
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    NO 2001003911
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                                                            20010810 <--
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PRAI US 1999-249011
                       Α
    US 1999-339596
                      Α2
                            19990624
                                     <--
    WO 2000-US3303
                      W
                            20000209
    The invention relates to humanized anti-B7-2 and anti-B7-1 antibodies,
AB
    wherein each comprise a variable region of non-human origin and at least a
    portion of an Ig of human origin. The invention also pertains to methods
    of treatment for various autoimmune diseases, transplant
     rejection, inflammatory disorders and infectious diseases by administering
    humanized anti-B7-2 and/or anti-B7-1 antibodies.
    humanized Ig antigen B7 autoimmune disease
ST
ΙT
    Animal cell line
        (ATCC CRL-12524 and PTA-263; humanized Ig. reactive with B7 mols. for
        treatment of autoimmune diseases, inflammation, transplant
        rejection, and infections)
ΙT
    Receptors
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (B7-1; humanized Ig. reactive with B7 mols. for treatment of
        autoimmune diseases, inflammation, transplant rejection, and
        infections)
     Glycoproteins, specific or class
ΙT
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (CD40-L (antigen CD40 ligand); humanized Ig. reactive with B7 mols. for
        treatment of autoimmune diseases, inflammation, transplant
        rejection, and infections)
IT
     Immunoglobulins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (G, human const. or framework; humanized Iq. reactive with B7 mols. for
        treatment of autoimmune diseases, inflammation, transplant
        rejection, and infections)
ΙΤ
     Immunoglobulins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (G2, human const. or framework; humanized Ig. reactive with B7 mols.
        for treatment of autoimmune diseases, inflammation, transplant
        rejection, and infections)
ΙT
     Immunoglobulins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (G4, human const. or framework; humanized Ig. reactive with B7 mols.
        for treatment of autoimmune diseases, inflammation, transplant
        rejection, and infections)
ΙT
     Histocompatibility antigens
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (MHC (major histocompatibility complex), class I; humanized Ig.
        reactive with B7 mols. for treatment of autoimmune diseases,
```

inflammation, transplant rejection, and infections) Chimeric gene ΤТ RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (animal; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) TT Interleukin 2 receptors RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (antagonists; humanized Ig. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) ΙT Anemia (disease) (aplastic; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) IT Transplant and Transplantation Transplant and Transplantation (bone marrow; humanized Ig. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) ΙT Gene, animal RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (chimeric; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) TΤ Blood products (component transplant; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) TT Gene therapy (delivery vector; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) ΙT Metabolism, animal (disorder, inborn; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) ITImmunoglobulins RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (heavy chains, humanized; humanized Iq. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) ΙΤ Immunodeficiency (hereditary; humanized Ig. reactive with B7 mols. for treatment of autoimmune diseases, inflammation, transplant rejection, and infections) ΤТ Adeno-associated virus Anemia (disease) Arthritis Asthma Autoimmune disease DNA sequences Diabetes mellitus Drug delivery systems Drugs Genetic vectors Hematopoiesis

Immunomodulators

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Immunosuppressants
Immunotherapy
Infection
Inflammation
Leukemia
Lymphocyte
Lymphoma
Mammal (Mammalia)
Molecular cloning
Mouse
Multiple sclerosis
Neoplasm
Protein sequences
Retroviridae
Rodent
Sickle cell anemia
Thalassemia
  Transplant rejection
   (humanized Ig. reactive with B7 mols. for treatment of autoimmune
   diseases, inflammation, transplant rejection, and infections)
Nucleic acids
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
   (humanized Ig. reactive with B7 mols. for treatment of autoimmune
   diseases, inflammation, transplant rejection, and infections)
Antigens
CD80 (antigen)
CD86 (antigen)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
   (humanized Iq. reactive with B7 mols. for treatment of autoimmune
   diseases, inflammation, transplant rejection, and infections)
CD40 (antigen)
RL: BSU (Biological study, unclassified); BIOL (Biological study)
   (humanized Ig. reactive with B7 mols. for treatment of autoimmune
   diseases, inflammation, transplant rejection, and infections)
Steroids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
   (humanized Ig. reactive with B7 mols. for treatment of autoimmune
   diseases, inflammation, transplant rejection, and infections)
Antibodies
Immunoglobulins
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
   (humanized; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Immune tolerance
   (induction; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Dermatitis
Intestine, disease
   (inflammatory; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Pancreatic islet of Langerhans
   (insulitis; humanized Ig. reactive with B7 mols. for
   treatment of autoimmune diseases, inflammation, transplant
   rejection, and infections)
```

TΥ

IT

ΤТ

ΤТ

TT

TT

IΤ

ΙT

ΙΤ

Immunoglobulins

IΤ

TT

TT

ΙT

TT

TT

ΤТ

ΤТ

ΙΤ

IT

IT

```
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
   (light chains, humanized; humanized Ig. reactive with B7 mols. for
   treatment of autoimmune diseases, inflammation, transplant
   rejection, and infections)
Antibodies
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
   (monoclonal, 3D1 and 1F1; humanized Ig. reactive with B7
   mols. for treatment of autoimmune diseases, inflammation,
   transplant rejection, and infections)
Myeloproliferative disorders
   (myelodysplasia; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Blood
   (peripheral; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Disease, animal
   (proliferative; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Cell
   (stem; humanized Iq. reactive with B7 mols. for treatment of autoimmune
   diseases, inflammation, transplant rejection, and infections)
Lupus erythematosus
   (systemic; humanized Iq. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Toxoids
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
   (tetanus; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
Blood cell
Bone marrow
Bone marrow
   (transplant; humanized Ig. reactive with B7 mols. for
   treatment of autoimmune diseases, inflammation, transplant
   rejection, and infections)
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
   (vector; humanized Ig. reactive with B7 mols. for treatment of
   autoimmune diseases, inflammation, transplant rejection, and
   infections)
               288406-95-1P
                              288406-96-2P
                                             288406-97-3P
                                                            288406-98-4P
288406-94-0P
288406-99-5P
               288407-00-1P
                              288407-01-2P
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
   (amino acid sequence; humanized Ig. reactive with B7 mols. for
   treatment of autoimmune diseases, inflammation, transplant
   rejection, and infections)
53-03-2, Prednisone
                      59-05-2, Methotrexate
                                              1247-42-3, Methyl prednisone
                                        9002-72-6, Growth hormone
9001-28-9, Blood coagulation factor IX
9004-10-8, Insulin, biological studies
                                         53123-88-9,
           59865-13-3, Cyclosporine
Rapamycin
                                       63798-73-2, Cyclosporine
104987-11-3, FK 506 113189-02-9
                                   128794-94-5, Mycophenolate mofetil
```

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179045-86-4, Simulect
     152923-56-3
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (humanized Iq. reactive with B7 mols. for treatment of autoimmune
        diseases, inflammation, transplant rejection, and infections)
IΤ
     9025-75-6, Calcineurin
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (inhibitor; humanized Iq. reactive with B7 mols. for treatment of
        autoimmune diseases, inflammation, transplant rejection, and
        infections)
ΙΤ
     288637-71-8P
                   288637-72-9P
                                   288637-73-0P
                                                  288637-74-1P
                                                                 288637-75-2P
     288637-76-3P
                  288637-77-4P 288637-78-5P
     RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
     PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP
     (Preparation); USES (Uses)
        (nucleotide sequence; humanized Iq. reactive with B7 mols. for
        treatment of autoimmune diseases, inflammation, transplant
        rejection, and infections)
     141977-02-8
                   246223-23-4
                                 288390-77-2
                                               288390-78-3
                                                             288390-79-4
TΤ
                   288390-82-9
                                 288390-83-0 288390-84-1
                                                             288390-85-2
     288390-80-7
                  288390-87-4
     288390-86-3
     RL: PRP (Properties)
        (unclaimed sequence; humanized Ig reactive with B7 mols. and methods of
        treatment therewith)
    ANSWER 9 OF 49 HCAPLUS COPYRIGHT 2002 ACS
1.65
AN
     2000:554496 HCAPLUS
DN
     134:236138
     Porcine islets of Langerhans isolated from normal and
TΙ
     hDAF transgenic pigs elicit the same acute inflammatory reaction during
     exposure to human blood; inhibition of the response with soluble
     complement receptor 1 and heparin
     Bennet, W.; Sundberg, B.; Song, Z.; Elgue, G.; Wennberg, L.;
ΑIJ
     Richards, A.; White, D. J.; Larsson, R.; Nilsson, B.;
     Groth, C.-G.; Korsgren, O.
     Karolinska Institute, Department of Transplantation Surgery, Huddinge
CS
     Hospital, Huddinge, Swed.
SO
     Transplantation Proceedings (2000), 32(5), 1065
     CODEN: TRPPA8; ISSN: 0041-1345
PΒ
     Elsevier Science Inc.
DT
     Journal
LA
     English
     15-10 (Immunochemistry)
CC
AB
     Porcine islets exposed to fresh human blood in vitro has been
     previously obsd. to elicit an immediate inflammatory reaction, resulting
     in disruption of islet integrity. Complement inhibition
     prevents hyperacute rejection of vascularized discordant
     xenografts. A study was conducted to investigate whether
     inhibition of the complement and coagulation systems in human blood
     affected the outcome of porcine islet damage. It was also
     tested whether islets from a single founder line of hDAF
     transgenic (TG) pigs are protected from this reaction. Islets
     of Langerhans from adult and fetal pigs exposed to human blood
     triggered an injurious, inflammatory response. A similar response was
     elicited by islets from hDAF TG pigs. The inflammatory response
     could be significantly reduced by adding inhibitors of the complement and
     coagulation systems.
     islet xenotransplantation pig human complement receptor
ST
     heparin inflammation
TT
     Coagulation
     Inflammation
```

Pancreatic islet of Langerhans

```
(acute inflammatory reaction in xenotransplantation of
       porcine islets and its inhibition with sol. complement
       receptor 1 and heparin)
ΙT
    Embryo, animal
       (fetus; acute inflammatory reaction in xenotransplantation of
       porcine islets and its inhibition with sol. complement receptor 1 and
       heparin)
TT
    Complement receptors
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
        (type 1; acute inflammatory reaction in xenotransplantation
       of porcine islets and its inhibition with sol. complement receptor 1
       and heparin)
    Transplant and Transplantation
ΙΤ
        (xenotransplant; acute inflammatory reaction in
       xenotransplantation of porcine islets and its inhibition with
       sol. complement receptor 1 and heparin)
    9005-49-6, Heparin, biological studies
TT
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (acute inflammatory reaction in xenotransplantation of
       porcine islets and its inhibition with sol. complement receptor 1 and
       heparin)
             THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
       4
(1) Bennet, W; to be published in Transplantation
(2) Carrington, C; Transplant Proc 1995, V27, P321 HCAPLUS
(3) Pruitt, S; Transplantation 1997, V63, P900 HCAPLUS
(4) White, D; XENO 1995, V3, P48
L65 ANSWER 10 OF 49 HCAPLUS COPYRIGHT 2002 ACS
    2000:553433 HCAPLUS
ΑN
DN
    133:168453
    Use of a clot preventing agent with transplanted cell and
ΤI
    tissues
    Korsgren, Olle; Bennet, William; Nilsson, Bo
ΙN
     ; Larsson, Rolf
PΑ
    Corline Systems AB, Swed.
    PCT Int. Appl., 22 pp.
SO
    CODEN: PIXXD2
DT
    Patent
LA
    English
TC
    ICM A61K038-36
    ICS A61K038-55; C12N005-06; C07K014-745
     63-8 (Pharmaceuticals)
CC
    Section cross-reference(s): 1
FAN.CNT 1
                    KIND DATE
                                         APPLICATION NO. DATE
    PATENT NO.
                                          _____
     _____
                    ____
                                         WO 2000-SE223
                                                          20000204 <--
    WO 2000045837
                     A1
                           20000810
PΙ
        W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
            CU, CZ, CZ, DE, DE, DK, DK, DM, EE, EE, ES, FI, FI, GB, GD, GE,
            GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
            LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
            RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
            US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
            DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                     SE 1999-398
                      Α
                                                           19990205 <--
     SE 9900398
                            20000806
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20020116

A 1

EP 1171156

EP 2000-906843 20000204 <--

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
PRAI SE 1999-398
                      Α
                            19990205
                                     <--
     WO 2000-SE223
                       W
                            20000204 <--
     The present invention is within the field of transplantation
     surgery. More closely, the present invention relates to use of a clotting
     preventing agent in the prodn. of a drug for administration in assocn.
     with transplantation of insulin producing cells in the
     form of isolated islets to patients with insulin
     dependent diabetes mellitus, IDDM. The invention is expected to
     significantly improve the clin. outcome of transplantation of
     islets of Langerhans. Langerhans
     islets induced aggradation of platelets when they were added to
     platelet rich plasma. Addn. of RGDS peptide to plasma totally
     abolished the aggregation and the consumption of platelets.
ST
     clot prevention transplant cell tissue; langerhans
     islet transplant peptide platelet aggregation
ΤТ
     Platelet (blood)
        (aggregation; use of clot preventing agent with transplanted
        cell and tissues)
     Diabetes mellitus
ΙT
        (insulin-dependent; use of clot preventing agent with
        transplanted cell and tissues)
ΙΤ
     Antibodies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
        (monoclonal; use of clot preventing agent with
        transplanted cell and tissues)
     Anticoagulants
ΙT
       Pancreatic islet of Langerhans
       Platelet aggregation inhibitors
     Surgery
       Transplant and Transplantation
        (use of clot preventing agent with transplanted cell and
        tissues)
     Immunoglobulin receptors
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (use of clot preventing agent with transplanted cell and
        tissues)
     9005-49-6, Heparin, biological studies
                                              91037-65-9
TT
     99896-85-2
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (use of clot preventing agent with transplanted cell and
        tissues)
              THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
(1) Hopt, U; Transplantation Proceedings 1993, V25(4), P2607 MEDLINE
(2) Imutran Limited; WO 9105855 A1 1991
(3) Nomura, Y; Transplantation Proceedings 1996, V28(3), P1849 MEDLINE
(4) Rigotti, P; Surgical Research Communications (United Kingdom) 1989, V6(2),
    P123
(5) Tatarkiewicz, K; Artif Organs (UNITED STATES) 1994, V18(10), P736 HCAPLUS
(6) Tollemar, J; Transplantation Proceedings 1988, V20(3), P479 MEDLINE
(7) Wagner; DE 19623440 Al 1997 HCAPLUS
    ANSWER 11 OF 49 HCAPLUS COPYRIGHT 2002 ACS
1.65
     2000:426869 HCAPLUS
ΑN
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133:64074

DN

- TI Medical implants containing angiogenic factors which provide space for cell transplant, sensor implantation, etc.
- IN Iwata, Hiroo; Inoue, Kazutomo; Ikada, Yoshito
- PA Kyoto University, Japan
- SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A61K009-00 ICS A61K038-00

CC 63-7 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2000178180	A2	20000627	JP 1998-354287	19981214 <
	JP 3089299	BZ	20000918		

AB The implant, which provides a space around which capillary bed (tissues rich in capillary vessels) are formed, comprises a base made from hydrogel, etc., and angiogenic factors. A polyethylene film inserted into a polyester mesh bag was impregnated with a soln. contg. poly(vinyl alc.), glutaraldehyde, and HCl to form poly(vinyl alc.) gel. A phosphate-buffered saline contg. agarose, hyaluronic acid, and basic FGF was injected into the above gel. The bag was s.c. implanted to a streptozotocin-induced diabetic rat and removed after 1 wk to form a space, into which isolated Langerhans islets were transplanted to normalize blood sugar.

ST capillary bed induction removable implant hydrogel angiogenic factor; bFGF polyvinyl alc gel cell **transplant** space providing implant

IT Medical goods

(bags; medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell **transplant** and sensor implantation)

IT Polyester fibers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (fabrics, mesh, bag; medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell transplant and sensor implantation)

IT Capillary vessel

Hydrogels

Sensors

#### Transplant and Transplantation

(medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell **transplant** and sensor implantation)

IT Angiogenic factors

Osteonectin

Platelet-derived growth factors

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell **transplant** and sensor implantation)

IT Angiogenesis

(neovascularization; medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell transplant and sensor implantation)

IT Transforming growth factors

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(.beta.-; medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell **transplant** and

sensor implantation)

IT 9002-89-5 9012-36-6, Agarose

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (gel; medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell transplant and sensor implantation)

IT 106096-92-8 106096-93-9 127464-60-2, Vascular endothelial growth factor 186270-49-5, Angiopoietin 1 194368-66-6, Angiopoietin 2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(medical implants contg. angiogenic factors to provide space around which capillary bed is formed, for cell **transplant** and sensor implantation)

- L65 ANSWER 12 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- AN 2000:356109 HCAPLUS
- DN 134:16089
- TI Effects of diabetes and hypoxia on gene markers of angiogenesis (HGF, cMET, uPA and uPAR, TGF-.alpha., TGF-.beta., bFGF and Vimentin) in cultured and transplanted rat islets
- AU Vasir, B.; Reitz, P.; Xu, G.; Sharma, A.; Bonner-Weir, S.; Weir, G. C.
- CS Joslin Diabetes Center and Department of Medicine, Research Division, Section on Islet Transplantation and Cell Biology, Harvard Medical School, Boston, MA, USA
- SO Diabetologia (2000), 43(6), 763-772 CODEN: DBTGAJ; ISSN: 0012-186X
- PB Springer-Verlag
- DT Journal
- LA English
- CC 14-8 (Mammalian Pathological Biochemistry)
- The vascularization of newly transplanted islets originates from AB the recipients. Because islets transplanted into a diabetic do less well than those transplanted into a euglycemic environment, the authors examd. the hypothesis that gene expression of angiogenic factors in grafts is delayed in diabetes. These factors include hepatocyte growth factor (HGF) and its receptor c-MET, and urokinase plasminogen activator (uPA) and its receptor uPAR, basic fibroblast growth factor (bFGF), TGF-.alpha. and TGF.beta.-1. Isolated rat islets were studied in vitro under normoxic and hypoxic culture conditions and gene expression was detd. with semi-quant. multiplex RT-PCR. The authors found that HGF but not c-MET expression was induced by hypoxia in vitro. Using syngeneic Lewis rats, gene expression was also studied in grafts on days 1, 3, 5, 7 and 14 after transplantation. In grafts of normoglycemic rats, HGF expression was enhanced on day 3 and maintained whereas expression of c-MET fell and remained down until day 14. Expression of uPA was up at day 3 and remained high; expression of uPAR was also up at day 3 but then fell to control levels at day 14. Expression of bFGF, TGF-.alpha. and TGF.beta.-1 persisted throughout. Vimentin, a marker of fibroblasts, had increased expression at day 1 which was further enhanced in subsequent days. In the grafts of diabetic recipients the expression of HGF, uPA and uPAR were delayed, being clearly expressed at day 5 rather than day 3. Vimentin expression was similarly delayed. This apparent delay in angiogenesis provides a potential mechanism for the less favorable outcomes of islets transplanted into diabetic recipients.
- ST diabetes islet transplant angiogenesis fibroblast vimentin; uPA uPAR islet transplant angiogenesis diabetes; TGF islet transplant angiogenesis diabetes; HGF cMET islet transplant angiogenesis diabetes; bFGF islet transplant angiogenesis diabetes
- IT Hepatocyte growth factor receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (cMET; diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets) TT Vimentins RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (diabetes and hypoxia effect on angiogenesis marker expression and fibroblasts in cultured and transplanted islets) TT Hepatocyte growth factor Urokinase-type plasminogen activator receptors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets) ITAngiogenesis Hypoxia, animal (diabetes and hypoxia effect on angiogenesis marker expression of in cultured and transplanted islets) ΙΤ Transplant and Transplantation (pancreatic islet; diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets) ΙT Pancreatic islet of Langerhans (transplant; diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets ΙT Transforming growth factors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (.alpha.-; diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets) ΙT Transforming growth factors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (.beta.-; diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets) ΙT 106096-93-9, Basic fibroblast growth factor RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (diabetes and hypoxia effect on angiogenesis marker expression and fibroblasts in cultured and transplanted islets) ΙT 139639-24-0, Urokinase type plasminogen activator RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (diabetes and hypoxia effect on angiogenesis marker expression in cultured and transplanted islets) RE.CNT THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD 52 (1) Ar'Rajab, A; Pancreas 1992, V7, P435 MEDLINE (2) Bacharach, E; Proc Natl Acad Sci USA 1992, V89, P10686 HCAPLUS (3) Basilico, C; Adv Cancer Res 1992, V59, P115 HCAPLUS (4) Bikfalvi, A; Endocrine Reviews 1997, V18, P26 HCAPLUS (5) Bottaro, D; Science 1991, V251, P802 HCAPLUS (6) Bussolino, F; J Cell Biol 1992, V119, P629 HCAPLUS (7) Carlsson, P; Diabetes 1998, V47, P1027 HCAPLUS (8) Davalli, A; Diabetes 1996, V45, P1161 HCAPLUS (9) De Petro, G; Exp Cell Res 1994, V213, P286 HCAPLUS (10) Dionne, K; Diabetes 1993, V42, P12 HCAPLUS (11) Ellis, V; J Biol Chem 1989, V264, P2185 HCAPLUS (12) Ferrara, N; Endocr Rev 1997, V18, P4 HCAPLUS (13) Folkman, J; Adv Cancer Res 1985, V43, P175 MEDLINE

(14) Gherardi, E; Cancer Cells 1991, V3, P227 MEDLINE

- (15) Gherardi, E; Proc Natl Acad Sci USA 1989, V86, P5844 HCAPLUS
- (16) Gille, J; Biol Chem 1997, V271, P11500
- (17) Gleadle, J; Am J Physiol 1995, V268, PC1362 HCAPLUS
- (18) Grant, D; Proc Natl Acad Sci USA 1993, V90, P1937 HCAPLUS
- (19) Gray, D; Diabetologia 1989, V32, P663 MEDLINE
- (20) Ingber, D; Cell 1989, V58, P803 HCAPLUS
- (21) Jeffers, M; Mol Cell Biol 1996, V16, P1115 HCAPLUS
- (22) Jensen, J; J Biol Chem 1996, V271, P18749 HCAPLUS
- (23) Jonas, J; J Biol Chem 1999, V274, P14112 HCAPLUS
- (24) Juang, J; Diabetes 1995, V43, P1334
- (25) Keymeulen, B; Transplantation 1993, V56, P60 HCAPLUS
- (26) Korsgren, O; Diabetes 1989, V38, P510 HCAPLUS
- (27) Lampugnani, M; Curr Opin Cell Biol 1997, V9, P674 HCAPLUS
- (28) Larsson, L; J Cell Biol 1984, V98, P894 HCAPLUS
- (29) Lopez-Nieto, C; J Biol Chem 1997, V272, P6471 HCAPLUS
- (30) Mandriota, S; J Biol Chem 1995, V270, P9709 HCAPLUS
- (31) Mandriota, S; J Biol Chem 1996, V271, P11500 HCAPLUS
- (32) Matschinsky, F; Diabetes 1996, V45, P223 HCAPLUS
- (33) Menger, M; Diabetes 1989, V38(Suppl 1), P199
- (34) Miyazawa, K; Biochem Biophys Res Commun 1989, V163, P967 HCAPLUS
- (35) Montesano, R; Cell 1991, V67, P901 HCAPLUS
- (36) Morain, W; Clin Plast Surg 1990, V17, P493 MEDLINE
- (37) Nakamura, T; Nature 1989, V342, P440 HCAPLUS
- (38) Naldini, L; EMBO J 1992, V11, P4825 HCAPLUS
- (39) Neufeld, G; FASEB J 1999, V13, P9 HCAPLUS
- (40) Odekon, L; J Cell Physiol 1992, V150, P258 HCAPLUS
- (41) Pepper, M; J Biol Chem 1992, V267, P20493 HCAPLUS
- (42) Pepper, M; J Cell Biol 1993, V122, P673 HCAPLUS
- (43) Rosen, E; Ciba Found Symp 1997, V212, P215 HCAPLUS
- (44) Rosen, E; Exp Cell Res 1990, V186, P22 HCAPLUS
- (45) Rosen, E; Int J Cancer 1994, V57, P706 HCAPLUS
- (46) Saksela, O; Ann Rev Cell Biol 1988, V4, P93 HCAPLUS
- (47) Tashiro, K; Proc Natl Acad Sci USA 1990, V87, P3200 HCAPLUS
- (48) Tsarfaty, I; Science 1992, V263, P1258
- (49) Vasir, B; Diabetes 1998, V47, P1894 HCAPLUS
- (50) Weider, K; J Cell Biol 1990, V111, P2097
- (51) Weitgasser, R; Acta Med Austriaca 1996, V23, P156 MEDLINE
- (52) Wojta, J; Lab Invest 1999, V79, P427 HCAPLUS
- L65 ANSWER 13 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- AN 2000:280885 HCAPLUS
- DN 133:280536
- TI Pancreatic islet **xenograft** tolerance after short-term costimulation blockade is associated with increased CD4+ T cell apoptosis but not immune deviation
- AU Lehnert, Anne M.; Yi, Shounan; Burgess, Jane S.; O'Connell, Philip J.
- CS National Pancreas Transplant Unit, University of Sydney at Westmead Hospital, Westmead, 2145, Australia
- SO Transplantation (2000), 69(6), 1176-1185 CODEN: TRPLAU; ISSN: 0041-1337
- PB Lippincott Williams & Wilkins
- DT Journal
- LA English
- CC 15-10 (Immunochemistry)
- AB The authors' purpose was to det. if short-term inhibition of the CD40/CD40L and CD28/B7 costimulatory pathways was capable of inducing specific unresponsiveness to pancreatic islet **xenografts** and to ascertain the mechanism of tolerance induction. Diabetic B6AF1 mice were **transplanted** with Wistar or DA rat islets and were treated short term with CTLA4-Fc and anti-CD40L mAb (MR1). Coadministration of CTLA4-Fc with MR1 resulted in indefinite rat islet **xenograft** survival in mice. Tolerance was species but not strain specific as long-term surviving recipients rejected third party

BALB/c islet allografts but accepted a second rat islet xenograft from the same or different donor strain. Tolerance induction was assocd. with a large leukocyte infiltrate that did not exhibit features of immune deviation as intragraft T cell-specific cytokine gene expression was globally reduced. In particular, interleukin-4 gene expression was markedly suppressed. There was a complete inhibition of anti-donor IgG, IgG1, and IgM antibody in the serum of CTLA4-Fc/MR1-treated animals. Tolerance induction was assocd. with increased CD4+ T cell apoptosis as there was an increased proportion of annexin-V staining and Fas expressing CD4+ T cells and a decrease in CD4+ T cell Bcl-2 expression in the grafts and draining lymph nodes of CTLA4-Fc/MR1-treated recipients. Combined costimulatory blockade was capable of producing tolerance to pancreatic islet xenografts. The induction of this tolerant state was assocd. with increased T cell apoptosis, whereas the maintenance phase of tolerance was assocd. with the accumulation of a large no. of inactive lymphocytes within the graft. pancreas xenograft tolerance costimulatory mol blockade Glycoproteins, specific or class RL: BSU (Biological study, unclassified); BIOL (Biological study) (CD40-L (antigen CD40 ligand); pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis but not immune deviation) Immunoglobulins RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative) (G1; pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. With increased CD4+ T cell apoptosis in relation to) Immunoglobulins RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative) (G; pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis in relation to) Immunoglobulins RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative) (M; pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. With increased CD4+ T cell apoptosis in relation to) Leukocyte (infiltration; pancreatic islet **xenograft** tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis in relation to) Cell migration (leukocyte infiltration; pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis in relation to) Apoptosis CD4-positive T cell Immune tolerance (pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis but not immune deviation) CD28 (antigen) CD40 (antigen) CD80 (antigen) RL: BSU (Biological study, unclassified); BIOL (Biological study) (pancreatic islet  $\mathbf{xenograft}$  tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis but not immune deviation)

ST

ΙT

TT

ΙT

TT

ΙT

IT

IΤ

ΙT

TT

Interleukin 4

ΙT

RL: BSU (Biological study, unclassified); BIOL (Biological study) (pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis in relation to) Transplant and Transplantation Transplant and Transplantation (xenotransplant, islet of Langerhans; pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis but not immune deviation) Pancreatic islet of Langerhans Transplant rejection (xenotransplant; pancreatic islet xenograft tolerance after short-term costimulation blockade is assocd. with increased CD4+ T cell apoptosis but not immune deviation) RE.CNT THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD (1) Armitage, R; Eur J Immunol 1993, V23, P2326 HCAPLUS (2) Banchereau, J; Annu Rev Immunol 1994, V12, P881 HCAPLUS (3) Borrow, P; J Exp Med 1996, V183, P2129 HCAPLUS (4) Brunner, T; Nature 1995, V373, P441 HCAPLUS (5) Cory, S; Annu Rev Immunol 1995, V13, P513 HCAPLUS (6) Dai, Z; J Immunol 1998, V161, P1659 HCAPLUS (7) Elwood, E; Transplantation 1998, V65, P1422 MEDLINE (8) Foy, T; Annu Rev Immunol 1996, V14, P591 HCAPLUS (9) Gordon, E; Diabetes 1998, V47(8), P1199 HCAPLUS (10) Goss, J; Diabetes 1994, V43, P16 MEDLINE (11) Green, J; Immunity 1994, V1, P501 HCAPLUS (12) Hancock, W; Proc Natl Acad Sci USA 1996, V93, P13967 HCAPLUS (13) Hao, L; Transplantation 1992, V53, P590 HCAPLUS (14) Ju, S; Nature 1995, V373, P444 HCAPLUS (15) Kirk, A; Nature Med 1999, V5, P686 HCAPLUS (16) Kirk, A; Proc Natl Acad Sci USA 1997, V94, P8789 HCAPLUS (17) Kneitz, B; Eur J Immunol 1995, V25, P2572 HCAPLUS (18) Larsen, C; Nature 1996, V381, P434 HCAPLUS (19) Lenschow, D; Science 1992, V257, P789 HCAPLUS (20) Li, X; J Immunol 1998, V161, P2241 HCAPLUS (21) Li, X; J Immunol 1998, V161, P890 HCAPLUS (22) Li, Y; Natl Med 1999, V5(11), P1298 HCAPLUS (23) Li, Y; Transplantation 1998, V66, P1387 HCAPLUS (24) Lindsten, T; Science 1989, V244, P339 HCAPLUS (25) Linsley, P; J Exp Med 1991, V174, P561 HCAPLUS (26) Medbury, H; Transplantation 1997, VA64, P1307 (27) Morris, C; J Immunol 1995, V154, P2470 HCAPLUS (28) Noelle, R; Proc Natl Acad Sci USA 1992, V89, P6550 HCAPLUS (29) Onodera, K; J Immunol 1997, V158, P1572 HCAPLUS (30) Pankewycz, O; Transplantation 1989, V47, P318 HCAPLUS (31) Pearson, T; Transplantation 1994, V57, P1701 HCAPLUS (32) Ranheim, E; J Exp Med 1993, V177, P925 HCAPLUS (33) Razi-wolf, Z; Proc Natl Acad Sci USA 1992, V89, P4210 HCAPLUS (34) Sayegh, M; J Exp Med 1995, V181, P1869 HCAPLUS (35) Schwartz, R; Cell 1992, V71, P1065 HCAPLUS (36) Scully, R; Eur J Immunol 1994, V24, P2383 HCAPLUS (37) Steurer, W; J Immunol 1995, V155, P1165 HCAPLUS (38) Stout, R; J Immunol 1996, V156, P8 HCAPLUS (39) Takeuchi, T; Transplantation 1992, V53, P1281 MEDLINE (40) Tan, P; J Exp Med 1993, V177, P165 HCAPLUS (41) Tran, H; J Immunol 1997, V159, P2232 HCAPLUS (42) Tran, H; Xenotransplantation 1997, V4, P222

(45) Van Parijs, L; J Immunol 1997, V158, P3738 HCAPLUS (46) Waldman, H; Annu Rev Immunol 1998, V16, P619

(44) Turka, L; Proc Natl Acad Sci USA 1992, V89, P11102 HCAPLUS

(43) Tran, H; Xenotransplantation 1999, V6, P1

- (47) Wells, A; Natl Med 1999, V5(11), P1303 HCAPLUS
- (48) Zheng, X; J Immunol 1999, V162, P4983 HCAPLUS
- ANSWER 14 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65
- ΑN 2000:264346 HCAPLUS
- DN 133:176095
- Damage to porcine islets of Langerhans after exposure TTto human blood in vitro, or after intraportal transplantation to cynomologus monkeys. Protective effects of sCRl and heparin
- ΑU Bennet, William; Sundberg, Berit; Lundgren, Torbjorn; Tibell, Annika; Groth, Carl-Gustav; Richards, Andrew; White, David J.; Elque, Graciela; Larsson, Rolf; Nilsson, Bo; Korsgren,
- CS Department of Transplantation Surgery, Karolinska Institutet, Huddinge Hospital, Huddinge, S-141 86, Swed.
- SO Transplantation (2000), 69(5), 711-719 CODEN: TRPLAU; ISSN: 0041-1337
- PВ Lippincott Williams & Wilkins
- DT Journal
- English LA
- CC
- 15-8 (Immunochemistry) Porcine islets offer an attractive alternative to human AΒ islets in clin. islet transplantation. preferred method of islet transplantation is intraportal injection into the liver. The authors have recently shown, both in vitro with human islets and in vivo with porcine islets, that islets exposed to allogeneic blood trigger an injurious inflammatory reaction characterized by activation of both coagulation and the complement systems. The authors have now tested whether a similar reaction is triggered when xenogeneic porcine islets are exposed to human blood in vitro and after intraportal transplantation into primates. Furthermore, the authors investigated the effect of inhibiting the complement and coaqulation systems. Islets isolated from adult and fetal porcine pancreas were perfused with fresh human blood in surface heparinized PVC tubings for 5-60 min. Blood cell counts and parameters related to coagulation and the complement system were analyzed, and islets were retrieved after the perifusion was examd. by immunohistochem. method. Heparin and sol. complement receptor 1 (sCR1; TP10, 100 .mu.g/mL) were added to the system in some expts. Furthermore, adult porcine islets were transplanted intraportally into untreated and sCR1- (40 mg/kg BW i.v.) treated cynomolgus monkeys, and plasma insulin concn. was monitored during 60 min. after transplantation. Porcine islets perifused with human blood triggered an immediate inflammatory reaction, characterized by a rapid consumption and activation of platelets, consumption of neutrophils and monocytes, activation of the coagulation and complement systems, and release of large amts. of insulin. Islet morphol. anal. revealed damaged islets embedded in clots and infiltrated with CD11+ leukocytes. C3a and C5b-9 was deposited on the islet surface, but human Iq was not. Complement inhibition with sCR1 reduced insulin release significantly. Intraportal islet transplantation into untreated cynomolgus monkeys resulted in a marked and rapid increase in plasma insulin concn. indicative of islet damage. Pretreatment of the monkeys with sCR1 resulted in significantly less insulin release than in untreated control monkeys. Exposure of isolated xenogeneic islets of Langerhans to blood, both in vitro and in vivo, resulted in acute islet damage. Complement and platelets seem to have a central role in the reactions described. Strategies to efficiently inhibit these reactions will be crucial for clin. intraportal islet xenotransplantation to be successful. ST
  - Langerhans islet xenotransplant inflammation

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complement platelet; insulin heparin
    Langerhans islet xenotransplant; complement
     receptor 1 Langerhans islet xenotransplant;
     neutrophil monocyte Langerhans islet
     xenotransplant
ΙT
    CD antigens
    CD antigens
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
     BIOL (Biological study); OCCU (Occurrence)
        (CD11; CD11+ leukocytes infiltration into Langerhans
        islets after xenotransplantation)
ΤТ
    Leukocyte
        (CD11+ leukocytes infiltration into Langerhans islets
        after xenotransplantation)
ΙT
     Blood-coagulation factors
     RL: BAC (Biological activity or effector, except adverse); BPR (Biological
     process); BSU (Biological study, unclassified); BIOL (Biological study);
     PROC (Process)
        (activation of coagulation system after porcine Langerhans
        islets xenotransplantation)
ΙT
     Lymphocyte
        (activation of lymphocytes after porcine Langerhans
        islets xenotransplantation)
ΙT
    Monocyte
        (activation of monocytes after porcine Langerhans
        islets xenotransplantation)
ΙT
        (activation of neutrophils after porcine Langerhans
        islets xenotransplantation)
ΙT
     Platelet (blood)
        (activation of platelets after porcine Langerhans
        islets xenotransplantation)
TT
     Inflammation
        (activation of platelets, neutrophils, and monocytes, the coagulation
        and complement systems, and insulin release after porcine
        Langerhans islets xenotransplantation)
ΙT
     Integrins
    Integrins
    RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
     BIOL (Biological study); OCCU (Occurrence)
        (antigens CD11; CD11+ leukocytes infiltration into Langerhans
        islets after xenotransplantation)
TΤ
    Complement receptors
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BIOL (Biological study)
        (type 1; protective effects of sCR1 and heparin against
        damage of porcine Langerhans islets after
        xenotransplantation)
ΤТ
     Transplant and Transplantation
       Transplant and Transplantation
        (xenotransplant, islet of
        Langerhans; protective effects of sCR1 and heparin
        against damage of porcine Langerhans islets after
        xenotransplantation)
ΤТ
     Pancreatic islet of Langerhans
        ( {\tt xenotransplant}; protective effects of sCR1 and
        heparin against damage of porcine Langerhans
        islets after xenotransplantation)
ΤТ
     Thromboglobulins
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     process); BSU (Biological study, unclassified); BIOL (Biological study);
     PROC (Process)
        (.beta.-; activation of coagulation system after porcine
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### Langerhans islets xenotransplantation) ΤТ 9003-99-0, Myeloperoxidase RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (activation of myeloperoxidase after porcine Langerhans islets xenotransplantation) 80295-42-7, Complement C3a 82986-89-8, Complement C5b-9 TT RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (activation of the complement system after porcine Langerhans islets xenotransplantation) ΙT 9000-94-6, Antithrombin RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (complex with FXIIa, FXIa, thrombin; activation of coaqulation system after porcine Langerhans islets xenotransplantation) ΙT 9002-04-4, Thrombin 37203-61-5, Factor XIa 37203-62-6, Factor XIIa RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (complex with antithrombin; activation of coagulation system after porcine Langerhans islets xenotransplantation) 9004-10-8, Insulin, biological studies IT RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (insulin secretion after porcine Langerhans islets after xenotransplantation) 9005-49-6, Heparin, biological studies ΤT RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (protective effects of sCR1 and heparin against damage of porcine Langerhans islets after xenotransplantation) THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 43 (1) Ando, B; J Biol Chem 1988, V263(24), P11907 HCAPLUS (2) Baldwin, W; Transplantation 1995, V59(6), P797 (3) Bennet, W; Abstract presentation at The Transplantation Society XVII World Congress 1998 (4) Bennet, W; The 4th International Congress for Xenotransplantation 1997 (5) Bennet, W; to be published in Diabetes 1999 (6) Brauer, R; Transplantation 1995, V59(2), P288 MEDLINE (7) Celi, A; Proc Natl Acad Sci U S A 1994, V91(19), P8767 HCAPLUS (8) Furie, B; Haemostasis 1996, V26(suppl 1), P60 (9) Geppert, T; Crit Rev Immunol 1989, V9(4), P313 HCAPLUS (10) Gong, J; J Clin Immunol 1996, V16(4), P222 MEDLINE (11) Gray, D; Xenotransplantation 1995, V2, P157 (12) Groth, C; Lancet 1994, V344(8934), P1402 MEDLINE (13) Grotting, J; Am J Pathol 1978, V92(3), P653 MEDLINE (14) Hamelmann, W; Transplantation 1994, V58(10), P1109 MEDLINE (15) Hering, B; Int Islet Transplant Registry, Newsletter 1996, V7(6), P5 (16) Kin, T; Cell Transplant 1996, V5(5 suppl 1), PS45 MEDLINE (17) Korbutt, G; Transplant Proc 1996, V28(2), P837 HCAPLUS (18) Korsgren, O; Transplantation 1988, V45(3), P509 MEDLINE (19) Larsson, R; Immunopharmacology 1997, V38, P119 HCAPLUS

(20) Mirenda, V; Transplantation 1997, V63(10), P1452 MEDLINE

(21) Mollnes, T; Scand J Immunol 1985, V22, P703

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(22) Moore, J; Adv Immunol 1993, V56, P267
(23) Nilsson, E; Scand J Immunol 1992, V35, P85
(24) Peerschke, E; J Exp Med 1993, V178(2), P579 HCAPLUS
(25) Pratt, J; Am J Pathol 1996, V149(6), P2055 HCAPLUS
(26) Ricordi, C; Acta Diabetol Latina 1990, V27(3), P185 MEDLINE
(27) Ricordi, C; Diabetes 1986, V35(6), P649 HCAPLUS
(28) Rinder, C; J Clin Invest 1995, V96(3), P1564 HCAPLUS
(29) Sanchez, J; Thromb Res 1998, V89(1), P41 HCAPLUS
(30) Schaapherder, A; Transplantation 1993, V56(6), P1576 MEDLINE
(31) Schaapherder, A; Transplantation 1995, V60(3), P287 HCAPLUS
(32) Schaapherder, A; Transplantation 1996, V62(1), P29 MEDLINE
(33) Schaapherder, A; corrected and republished article originally printed in
   Transplantation 1993, V56(3), P739
(34) Sims, P; Immunol Today 1991, V12(9), P338 HCAPLUS
(35) Soderlund, J; Transplantation 1999, V67, P784 MEDLINE
(36) Suckfull, M; Transplant Int 1994, V7, P324 MEDLINE
(37) Van Deijnen, J; Cell Tissue Res 1994, V277(1), P115 HCAPLUS
(38) van Suylichem, P; Cell Transplant 1995, V4(6), P609 MEDLINE
(39) Walsh, P; Blood 1981, V57, P106 MEDLINE
(40) Walsh, P; Blood 1986, V68, P225 HCAPLUS
(41) Weir, G; Diabetes 1997, V46(8), P1247 HCAPLUS
(42) Wiedmer, T; Blood 1991, V78(11), P2880 HCAPLUS
(43) Zhao, Z; Transplantation 1994, V57(2), P245 MEDLINE
L65
    ANSWER 15 OF 49 HCAPLUS COPYRIGHT 2002 ACS
    2000:84982 HCAPLUS
ΑN
DN
    132:133245
    An internal ribosome entry site from the X-linked inhibitor of apoptosis
TΙ
    gene and its uses
    Korneluk, Robert G.; Holcik, Martin; Liston, Peter
TN
    University of Ottawa, Can.
PA
    PCT Int. Appl., 87 pp.
SO
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DT
    Patent
LA
    English
IC
    ICM C12N015-12
    ICS C12N005-10; C07K014-47; C12Q001-68; G01N033-50
CC
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PRAI US 1998-121979
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    US 1999-332319
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                           19990722 <--
    WO 1999-IB1415
                     W
    A novel internal ribosome entry site (IRES) sequence from the X-linked
AB
     inhibitor of apoptosis (XIAP) gene is identified and characterized.
    invention also features methods for using the XIAP IRES to increase
     cap-independent translation of polypeptide coding sequences linked to the
    XIAP IRES, and methods for isolating compds. that modulate cap-independent
     translation. The IRES was identified in the very long 5'-UTR of the XIAP
     gene by function. Cap-independent initiation of translation from the IRES
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was demonstrated by resistance of expression of the downstream gene to

inhibition by poliovirus protease 2A. The IRES could also mediate translation during serum starvation and the IRES also improved XIAP-mediated inhibition of apoptosis during serum starvation. The La autoantigen was shown to be involved in translation from the IRES.

ST IRES gene XIAP apoptosis regulation starvation

IT Proteins, specific or class

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Bad, induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Bax, induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Bcl-x, L1, regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (FADD (Fas-assocd. death domain), induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Genetic element

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(IRES (internal ribosomal entry site) element; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Mouse (Mus musculus)

(IRES elements of XIAP genes of human and; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Translation, genetic

Translation initiation

(IRES for cap-independent translation of reporter gene in screening for inhibitors of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Apoptosis

(IRES of XIAP gene in control of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Antigens

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(La (lymphocyte activation), in cap-independent gene expression for IRES; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (TRADD (tumor necrosis factor receptor-assocd. death domain), induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (XAF, induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study) (XIAP; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(apoptosis-regulating, XIAP, NAIP, TIAP, HIAP1, HIAP2, regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: BSU (Biological study, unclassified); BIOL (Biological study) (bcl-2, regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Neurotrophic factors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (brain-derived, regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Astrocyte

Myoblast

Oligodendrocyte

## Pancreatic islet of Langerhans

(control of apoptosis in treatment of diseases affecting; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Autoimmune disease

#### Transplant rejection

(control of apoptosis in treatment of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Disease, animal

(degenerative, control of apoptosis in treatment of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Muscle

(fiber, control of apoptosis in treatment of diseases affecting; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Hair

Ovary

(follicle, control of apoptosis in treatment of diseases affecting; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Drug screening

(for translation inhibitors; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Proteins, specific or class

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (gene VHL, induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Neurotrophic factors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (glia-derived, regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Brain

Heart

(induction of anti-apoptosis protein in treatment of hypoxia in; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Hypoxia, animal

(induction of anti-apoptosis protein in treatment of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT p53 (protein)

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

IT Heart

(myocyte, control of apoptosis in treatment of diseases affecting; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses)

ΙΤ Nerve (neuron, control of apoptosis in treatment of diseases affecting; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) DNA sequences TΨ (of IRES elements of XIAP genes of human and mouse; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) ΙΤ (photoreceptor, control of apoptosis in treatment of diseases affecting; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) ΤТ Platelet-derived growth factors RL: BSU (Biological study, unclassified); BIOL (Biological study) (regulation of levels of .beta. subunit; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) ΙT Ciliary neurotrophic factor RL: BSU (Biological study, unclassified); BIOL (Biological study) (regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) ΙΤ Antitumor agents (screening for translation inhibitors for use as; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) ΙΤ 127464-60-2, Vascular endothelial growth factor RL: BSU (Biological study, unclassified); BIOL (Biological study) (IRES of gene for, in reporter constructs for screening for translation inhibitors; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) 169592-56-7, Caspase 3 ΙT 122191-40-6, Caspase 1 179241-78-2, Caspase 8 180189-96-2, Caspase 9 182372-14-1, Caspase 2 182372-15-2, Caspase 6 182762-08-9, Caspase 4 189088-85-5, Caspase 10 189258-14-8, Caspase 7 192465-11-5, Caspase 5 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (induction of synthesis of, in induction of apoptosis; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its 106096-93-9, Basic fibroblast growth factor TΤ RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (induction of synthesis of, in treatment of hypoxic stress; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) 256436-53-0 256436-54-1 256436-55-2 256436-52-9 ΙT 256436-51-8 256436-57-4 256436-58-5 256436-59-6 256436-60-9 256436-56-3 256436-62-1 256436-61-0 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (nucleotide sequence; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) 9004-10-8, Insulin, biological studies 9014-42-0, TT Thrombopoietin 11096-26-7, Erythropoietin **67763-97-7**, IGF-2 130939-66-1, Neurotrophic factor 3 143375-33-1, Neurotrophic factor 4 RL: BSU (Biological study, unclassified); BIOL (Biological study) (regulation of levels of; internal ribosome entry site from X-linked inhibitor of apoptosis gene and its uses) 256438-37-6, 1: PN: WO0005366 SEQID: 1 unclaimed DNA 256438-38-7, 2: PN: IΤ 256438-39-8, 3: PN: WO0005366 SEQID: 3 WOO005366 SEQID: 2 unclaimed DNA 256438-41-2, 5: PN: WO0005366 SEQID: 5 unclaimed DNA unclaimed DNA 256438-42-3, 7: PN: WO0005366 SEQID: 7 unclaimed DNA 256438-43-4, 9: PN: 256438-45-6 256438-46-7 WOO005366 SEQID: 9 unclaimed DNA 256438-44-5 256438-50-3 256438-51-4 256438-48-9 256438-49-0 256438-47-8 256438-52-5 RL: PRP (Properties)

(unclaimed nucleotide sequence; internal ribosome entry site from the

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X-linked inhibitor of apoptosis gene and its uses)
ΙT
     256438-40-1
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        (unclaimed protein sequence; internal ribosome entry site from the
       X-linked inhibitor of apoptosis gene and its uses)
    ANSWER 16 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
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ΑN
    132:90359
DN
     Polar amino acids in medium and hydrogel matrix for long-term
TI
    proliferation of cells
ΙN
    Usala, Anton-Lewis; Klann, Richard Chris
PΆ
    Encelle, Inc., USA
SO
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     9-11 (Biochemical Methods)
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                     A2
                           19951207
    US 1995-568482
    WO 1999-US15464 W
                           19990709 <--
    A cell culture medium and hydrogel matrix for long term storage and
AB
    proliferation of cells is provided. The cell culture medium and hydrogel matrix may include an effective amt. of polar amino acids, the polar amino
    acids selected from the group consisting of arginine, lysine, histidine,
    glutamic acid, and aspartic acid. One embodiment of the cell culture
    medium comprises about 5 to about 150 mM of polar amino acids. The
    hydrogel matrix comprises about 3 to about 150 mM of polar amino acids.
    L-arginine and L-glutamic acid are preferably supplemented in the cell
    culture medium. L-arginine, L-lysine, and L-glutamic acid are preferably
    supplemented in the hydrogel matrix. A method of maintaining viability
    and functioning of a transplant is also provided. The method of
    maintaining viability of a transplant includes encapsulating the
    cells in a hydrogel matrix and injecting the encapsulated cells into the
    host organism. The matrix of the present invention may also be used to
    promote vascularization in a transplant site prior to injection
    of cells. Digested unpurified and purified porcine pancreatic tissue
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samples were placed in a matrix contg. 5~mM lysine, 5~mM arginine, and 10~mM glutamic acid in addn. to 180~mu.M cysteine and stored at -20.degree. Inspection of the cells indicated appropriate morphol. of both the islet tissue and digestive acinar cells in an unpurified prepn. that was frozen for 6~wk.

ST polar amino acid culture medium hydrogel matrix; transplant hydrogel matrix encapsulation cell; pancreas islet acinar cell preservation insulin

IT Liver

(Kupffer cell; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Pancreas

(acinar cell; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Blood serum

(as nutrient source; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Albumins, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(as nutrient source; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Brain

Epithelium

Heart

Kidney

Liver

Lung

Thymus gland

Thyroid gland

(cells of; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Enzymes, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(culture medium for cell protection during tissue digestion with; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Chelating agents

(divalent, hydrogel matrix contg.; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Liver

(hepatocyte; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Cryoprotectants

(hydrogel matrix contg.; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Collagens, biological studies

RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydrogel matrix contg.; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Gelatins, biological studies

RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydrogel matrix of; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Cell

(long-term storage of; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

IT Transplant and Transplantation

(matrix-encapsulated cells for; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells)

ΙT Nerve (neuron; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) ΙT Animal tissue culture Cell proliferation Cryopreservation Culture media Erythrocyte Hydrogels Matrix media Nutrients Pancreatic islet of Langerhans (polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) ΙT Amino acids, biological studies RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (polar; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) Oxides (inorganic), biological studies ΙT RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (superoxides, inhibitor of; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) ΙT 9004-54-0, Dextran, biological studies RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (as cryoprotectant, hydrogel matrix contg.; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) ΙT 52-90-4, L-Cysteine, biological studies 56-89-3, Cystine, biological 74-79-3D, L-Arginine, analogs, biological studies Aminoquanidine 9005-49-6, Heparin, biological studies RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (as nitric oxide inhibitor; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) 60-00-4, EDTA, biological studies TT RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (as superoxide inhibitor; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) IT 10102-43-9, Nitric oxide, biological studies RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (inhibitor of; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) ΙT 9004-10-8, Insulin, biological studies RL: BSU (Biological study, unclassified); MFM (Metabolic formation); THU (Therapeutic use); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses) (matrix encapsulation of acinar and islet cells for transplantation and prodn. of; polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) TΤ 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, 56-87-1, Lysine, biological studies 71-00-1, biological studies Histidine, biological studies 74-79-3, Arginine, biological studies RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (polar amino acids in medium and hydrogel matrix for long-term proliferation of cells) ANSWER 17 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65 2000:53454 HCAPLUS ΑN 132:98151 DN

Pharmaceutical hydrogels for obscuring immune recognition of a

ΤT

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transplant
IN
     Usala, Anton-Lewis; Klann, Richard Chris
PA
     Encelle, Inc., USA
SO
     PCT Int. Appl., 30 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
IC
     ICM A61L033-00
CC
     63-6 (Pharmaceuticals)
     Section cross-reference(s): 1
FAN.CNT 12
     PATENT NO.
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             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
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    WO 1999-US15465
    A method of obscuring immune recognition of a transplant by a
    host mammal is provided by encapsulating tissue suitable for use in a
    transplant within a hydrogel matrix, wherein the hydrogel matrix
     comprises gelatin, dextran, at least one nitric oxide inhibitor, and an
    effective amt. of polar amino acids. The matrix binds to the cell surface
    proteins of the tissue and obscures recognition of the tissue by high
    affinity antibodies produced by the recipient of the transplant.
    A hydrogel was prepd. from a mixt. of amino acids, albumin, dextran, EDTA,
    and collagen in Medium 199 contg. porcine pancreatic cells. The hydrogel
    was injected to a diabetic dog over a 19 wk period. The amt. of
     insulin required to maintain the target glucose value (180 mg/dL
     or less) decreased after the injection and the av. glucose level of the
    dog decreased.
ST
    pharmaceutical hydrogel immune recognition transplant
IT
        (acinus, cells; pharmaceutical hydrogels for obscuring immune
        recognition of transplant)
ΙT
     Proteins, specific or class
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (cell surface-assocd.; pharmaceutical hydrogels for obscuring immune
        recognition of transplant)
ΙT
     Brain
    Heart
    Kidney
    Liver
    Lung
       Pancreatic islet of Langerhans
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Thyme (Thymus) Thyroid gland (cells; pharmaceutical hydrogels for obscuring immune recognition of transplant) IΤ Drug delivery systems (hydrogels; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT Drug delivery systems (implants; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT Drug delivery systems (injections, i.m.; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT Drug delivery systems (injections, i.p.; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT Drug delivery systems (injections, i.v.; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT Drug delivery systems (injections, s.c.; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT Drug delivery systems (microcapsules; pharmaceutical hydrogels for obscuring immune recognition of transplant) IT Immunity (pharmaceutical hydrogels for obscuring immune recognition of transplant) IΤ Collagens, biological studies Gelatins, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical hydrogels for obscuring immune recognition of transplant) Amino acids, biological studies ΙΤ RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (polar; pharmaceutical hydrogels for obscuring immune recognition of transplant) ΙT 10102-43-9, Nitric oxide, biological studies RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitor; pharmaceutical hydrogels for obscuring immune recognition of transplant) 56-86-0, L Glutamic acid, 56-84-8, L Aspartic acid, biological studies ΙT biological studies 56-87-1, L Lysine, biological studies EDTA, biological studies 71-00-1, L Histidine, biological studies 74-79-3, L Arginine, biological studies 79-17-4, Aminoquanidine 9004-54-0, Dextran,, biological studies 9005-49-6, Heparin, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pharmaceutical hydrogels for obscuring immune recognition of transplant) THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT RE (1) Bard Inc C R; EP 0526756 A 1993 HCAPLUS (2) Encelle Inc; WO 9720569 A 1997 HCAPLUS (3) Lifecell Corp; EP 0564786 A 1993 HCAPLUS ANSWER 18 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65 1999:769132 HCAPLUS AN DN 132:62561 Maintenance of beta-cell function and survival following islet isolation TΙ requires re-establishment of the islet-matrix relationship ΑU Wang, R. N.; Rosenberg, L.

Department of Surgery, McGill University, Montreal, QC, Can.

CS

- SO Journal of Endocrinology (1999), 163(2), 181-190 CODEN: JOENAK; ISSN: 0022-0795
- PB Society for Endocrinology
- DT Journal
- LA English
- CC 14-8 (Mammalian Pathological Biochemistry)
   Section cross-reference(s): 2
- AB Islet transplantation is assocd. with a high rate of early graft failure, a problem that remains poorly understood. It is probable that the destruction of the islet microenvironment and loss of tropic support that occur during isolation lead to compromised survival. The purpose of this study was to det. the role of matrix-integrin interactions on beta-cell survival and function following islet isolation. Canine islets were obtained by conventional methods. Immediately after isolation, the peri-insular basement membrane (BM) was absent. The ability of islets maintained in suspension culture to attach to a collagen matrix declined progressively over 6 days. Attachment could be blocked by an arginine-glycine-aspartate (RGD)
  - ) motif-presenting synthetic peptide, thereby implicating an integrin-mediated process. Characterization of cell surface integrins by immunocytochem. (ICC) demonstrated that the expression of integrins .alpha.3, .alpha.5 and .alpha.V diminished during the culture period. This change was coincident with both a decrease in beta-cell function (proinsulin gene expression, islet insulin content and stimulated insulin release) and a rise in beta-cell death from apoptosis, as detd. by in situ cell death detection (TUNEL) assay. These adverse events were prevented or delayed by exposure of islets to matrix proteins. In conclusion, routine islet isolation disrupts the cell-matrix relationship leading to a variety of structural and functional abnormalities, including apoptotic cell death. These alterations can be diminished by restoration of a culture microenvironment that includes matrix proteins.
- ST pancreatic beta cell isolation survival matrix
- IT Collagens, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(culture matrix; pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship)

IT Apoptosis

Basement membrane

Cell membrane

Extracellular matrix

Organ preservation

# Transplant and Transplantation

(pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship)

IT Animal tissue culture

(suspension; pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship)

IT Integrins

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(.alpha.v; pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship)

IT Integrins

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(.alpha.3; pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship)  ${\bf r}$ 

ΙT Integrins RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative) (.alpha.5; pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship) ΙT Pancreatic islet of Langerhans (.beta.-cell; pancreatic .beta.cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship) ΤТ 9004-10-8, Insulin, biological studies RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship) ΙT 9035-68-1, Proinsulin RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process) (pancreatic .beta.-cell function maintenance and survival following islet isolation requires re-establishment of islet-matrix relationship) RE.CNT THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD RE (1) Bates, R; Cancer and Metastasis Reviews 1995, V14, P191 HCAPLUS (2) Beekman, B; Experimental Cell Research 1997, V237, P135 HCAPLUS (3) Bissell, M; Journal of Theoretical Biology 1982, V99, P31 HCAPLUS (4) Brendel, M; Cell Transplantation 1994, V3, P427 MEDLINE (5) Chen, C; Science 1997, V276, P1425 HCAPLUS (6) Davalli, A; Diabetes 1996, V5, P1161 (7) Davalli, A; Transplantation 1995, V59, P817 MEDLINE (8) Dedhar, S; Current Opinion in Cell Biology 1996, V8, P657 HCAPLUS (9) Frisch, S; Journal of Cellular Biology 1994, V124, P619 HCAPLUS (10) Gray, D; Pancreatic islet cell transplantation 1992, P89 (11) Grzesik, W; Journal of Dental Research 1998, V77, P1606 HCAPLUS (12) Hering, B; Justus-Liebig-University of Giessen 1994, V4(5), P1 (13) Horaguchi, A; Diabetes 1981, V30, P455 MEDLINE (14) Hynes, R; Cell 1992, V69, P11 HCAPLUS (15) Ingber, D; Principles of Tissue Engineering 1997, P89 (16) Ingber, D; The pancreas:Biology, Pathobiology and Disease 1993, P369 (17) Juliano, R; Journal of Cellular Biology 1993, V120, P577 HCAPLUS (18) Kaiser, A; American Journal of Physiology 1995, V269, PC1295 HCAPLUS (19) Lin, C; FASEB Journal 1993, V7, P737 HCAPLUS (20) Lucas-Clerc, C; Molecular and Cellular Endocrinology 1993, V94, P9 HCAPLUS (21) Martins-Green, M; Principles of Tissue Engineering 1997, P23 (22) Meredith, J; Endocrine Reviews 1996, V17, P207 HCAPLUS (23) Meredith, J; Molecular Biology of the Cell 1993, V4, P953 HCAPLUS (24) Meredith, J; Trends in Cell Biology 1997, V7, P146 HCAPLUS (25) Metrakos, P; Transplantation Proceedings 1994, V26, P3349 HCAPLUS (26) Orloff, M; Annals of Surgery 1987, V206, P324 MEDLINE (27) Orloff, M; Transplantation 1988, V45, P307 MEDLINE (28) Paraskevas, S; Transplantation Proceedings 1997, V29, P750 MEDLINE (29) Raff, M; Nature 1992, V356, P397 MEDLINE (30) Ricordi, C; Pancreatic Islet Cell Transplantation 1992, P99 (31) Rosenberg, L; Cellular inter-relationship in the pancreas - implications for islet transplantation:introduction 1996, Pl (32) Ruoslahti, E; Cell 1994, V7, P477 (33) Schnaper, H; Pediatric Nephrology 1993, V7, P96 MEDLINE (34) Schwartz, M; Annual Review of Cell and Developmental Biology 1995, V11, P549 HCAPLUS (35) Schwartz, M; Molecular Biology of the Cell 1994, V5, P389 HCAPLUS

(36) Schwartz, S; American Journal of Pathology 1995, V147, P229 MEDLINE

(37) Shorrock, K; Journal of Pathology 1991, V165, P105 HCAPLUS

```
(38) van Deijnen, J; Cell and Tissue Research 1993, V267, P139
(39) Vitale, M; Endocrinology 1997, V138, P1642 HCAPLUS
(40) Wang, R; Diabetologia 1994, V37, P1088 HCAPLUS
(41) Wang, R; Journal of Histochemistry and Cytochemistry 1999, V47, P499
    HCAPLUS
(42) Weinel, R; International Journal of Cancer 1992, V52, P827 HCAPLUS
(43) Yuan, S; Differentiation 1996, V61, P67 MEDLINE
(44) Zhang, Z; Proceedings of the National Academy of Sciences of the USA 1995,
    V92, P6161 HCAPLUS
    ANSWER 19 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
    1999:736930 HCAPLUS
ΑN
    131:350265
DN
    Antibodies to CD23
TΙ
    Bonnefoy, Jean-Yves Marcel Paul; Crowe, Scott James; Ellis, Jonathan
ΤN
    Henry; Rapson, Nicholas Timothy; Shearin, Jean
PA
    Glaxo Group Limited, UK
     PCT Int. Appl., 81 pp.
SO
    CODEN: PIXXD2
\mathsf{DT}
    Patent
LA
    English
IC
    ICM C12N015-13
    ICS C07K016-28; A61K039-395; C12N015-62
CC
    15-3 (Immunochemistry)
    Section cross-reference(s): 3
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                                     WO 1999-GB1434 19990507 <--
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    WO 9958679
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AΒ
    The authors disclose the prepn. and characterization of murine
    monoclonal and humanized antibodies which bind to the
    CD23 (Fc.epsilon.RII receptor) antigen. In one example,
    humanized IgG1, with mutations to eliminate C1q and Fc binding,
    was shown to bind to CD23 with assocn. rates of the order of 1.5-1.85 \times
     106 M-1 s-1 and to not exhibit complement activation or ADCC. The authors
     suggest these antibodies may find use in the treatment of
     autoimmune and inflammatory disorders.
     antibody CD23 antigen; FcepsilonRII receptor antibody
ST
ΙΤ
    Antitumor agents
        (B-cell leukemia; anti-CD23 antibodies as)
ΙT
    Antitumor agents
        (B-cell lymphoma; anti-CD23 antibodies as)
ΙΤ
     Intestine, disease
        (Crohn's; anti-CD23 antibodies in treatment of)
ΙT
     Immunoglobulin receptors
```

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RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (IgE type II, sol.; prepn. and characterization of antibodies to)
ΙT
     Immunoglobulin receptors
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (IgE type II; prepn. and characterization of antibodies to)
TT
    Allergy inhibitors
    Anti-inflammatory agents
    Antiarthritics
    Antiasthmatics
    Antidiabetic agents
        (anti-CD23 antibodies as)
ΤТ
    Dermatitis
    Eczema
     Psoriasis
     Sjogren's syndrome
     Urticaria
        (anti-CD23 antibodies in treatment of)
    Thyroid gland, disease
IΤ
        (autoimmune thyroiditis; anti-CD23 antibodies in treatment of)
TT
     Bronchi
        (bronchitis; anti-CD23 antibodies in treatment of)
TT
    Antibodies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (chimeric; to CD23 on hematopoietic cells)
ΙT
     Lung, disease
        (chronic obstructive; anti-CD23 antibodies in treatment of)
IΤ
     Kidney, disease
        (glomerulonephritis; anti-CD23 antibodies in treatment of)
ΙT
     Transplant and Transplantation
        (graft-vs.-host reaction;
        anti-CD23 antibodies in treatment of)
ΙΤ
     Immunoglobulins
     RL: PRP (Properties)
        (heavy chains, CDR; of antibodies to CD23)
ΙT
     Antibodies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (humanized; to CD23 on hematopoietic cells)
     Intestine, disease
IΤ
        (inflammatory; anti-CD23 antibodies in treatment of)
TT
     Pancreatic islet of Langerhans
        (insulitis; anti-CD23 antibodies in treatment of)
TΤ
     Immunoglobulins
     RL: PRP (Properties)
        (light chains, CDR; of antibodies to CD23)
IΤ
     Kidney, disease
        (nephrotic syndrome; anti-CD23 antibodies in treatment of)
     Protein sequences
IΤ
     cDNA sequences
        (of antibody fragments to CD23)
ΙT
     Blood cell
        (prepn. and characterization of antibodies to CD23 of)
IΤ
    Nose
        (rhinitis; anti-CD23 antibodies in treatment of)
ΙT
     Lupus erythematosus
        (systemic; anti-CD23 antibodies in treatment of)
ΙT
     Multiple sclerosis
        (therapeutic agents; anti-CD23 antibodies as)
```

```
TΤ
     Antibodies
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (to CD23 on hematopoietic cells)
ΙT
     Intestine, disease
        (ulcerative colitis; anti-CD23 antibodies in treatment of)
ΙT
     Eye, disease
        (uveitis; anti-CD23 antibodies in treatment of)
     250332-00-4 250332-01-5
                                250332-02-6
TΤ
     RL: PRP (Properties)
        (amino acid sequence; anti-CD23 antibodies as)
                  250332-05-9
                                250332-06-0
ΙT
     250332-04-8
                                              250332-07-1
     RL: PRP (Properties)
        (nucleotide sequence; anti-CD23 antibodies as)
ΙT
     175175-73-2
                 201468-24-8, LMSTRAS 250143-97-6, RSSKSLLYKDGKTYLN
     250143-98-7, OOLVEYPFT
                            250143-99-8, GYWMS
                                                  250144-00-4,
    EIRLKSDNYATHYAESVKG
     RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP
     (Properties); BIOL (Biological study); OCCU (Occurrence)
        (of antibodies to CD23)
     250242-61-6, CGCTCGAGTAAGAGTCTCCTGTATAAGGATGGGAAGACATACTTGAAT
ΤT
     250242-63-8, TTGATGTCCACCCGGGCATCA
                                         250242-65-0,
    CAACAGCTGGTAGAGTATCCATTCACG
                                  250242-67-2, GGCTACTGGATGTCC
                                                                   250242-69-4,
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     RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
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        (of nucleic acid encoding antibodies to CD23)
     162565-25-5, GenBank A18463
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        (unclaimed nucleotide sequence; antibodies to CD23)
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     250253-07-7
     RL: PRP (Properties)
        (unclaimed sequence; antibodies to CD23)
              THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
(1) Bonnefoy, J; The Journal of Immunology 1987, V138(9), P2970 HCAPLUS
(2) Flores-Romo, L; Science 1993, V261(5124), P1038 HCAPLUS
(3) Glaxo Group Ltd; WO 9612741 A 1996 HCAPLUS
(4) Idec Pharmaceuticals; WO 9302108 A 1993 HCAPLUS
(5) Idec Pharmaceuticals Corp; WO 9837099 A 1998 HCAPLUS
(6) Plater-Zyberk, C; Nature Medicine 1995, V1(8), P781 HCAPLUS
L65
    ANSWER 20 OF 49 HCAPLUS COPYRIGHT 2002 ACS
ΑN
    1999:672498 HCAPLUS
DN
     131:291339
ΤI
    Vascularizable biomaterials for creation of three-dimensional tissues
ΤN
     Halberstadt, Craig R.; Holder, Walter D., Jr.
PA
     Charlotte-Mecklenberg Hospital Authority, USA
SO
     PCT Int. Appl., 52 pp.
    CODEN: PIXXD2
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    Patent
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     ICM A01N001-02
IC
     ICS C12P019-34; C12M003-00
CC
     63-7 (Pharmaceuticals)
     Section cross-reference(s): 9, 14
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FAN.CNT 1

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PATENT NO.
                     KIND DATE
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PΙ
    WO 9952356
                     A1 19991021
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        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
             DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
             KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
            MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
             TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
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             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
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     EP 1069822
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     JP 2002511284
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PRAI US 1998-58619
                      A2 19980409
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                     W
                           19990409 <--
    WO 1999-US7816
    A method of providing a vascularized, three-dimensional tissue in a living
AΒ
    subject is disclosed. The method includes the steps of (a) creating, from
    a biocompatible material capable of supporting cell adhesion, growth, and
    migration, a porous construct contg. cells to be transplanted,
    and (b) delivering the construct into an area of interest in the living
    subject to form a vascularized three-dimensional tissue. The preferred
    construct has a dimension in which it is about 50 .mu.mm to about 500
     .mu.mm from the outermost surface to the center of the construct. The
    preferred construct also has an interconnected porous structure having a
    pore size of from about 10 .mu.mm to no greater than 300 .mu.mm. The
    cells within the preferred construct are no greater than 250 .mu.mm from
    an outer surface of the construct.
ST
    artificial organ tissue vascularization transplant
ΙT
    Testis
        (Sertoli cell, culture of; vascularizable biomaterials for creation of
        three-dimensional tissues)
IT
    Adipose tissue
        (adipocyte, culture of; vascularizable biomaterials for creation of
        three-dimensional tissues)
IT
     Transplant and Transplantation
        (allotransplant; vascularizable biomaterials for creation of
        three-dimensional tissues)
ΙT
    Artery
        (arteriole, of biocompatible pouch; vascularizable biomaterials for
        creation of three-dimensional tissues)
ΙΤ
    Animal tissue
     Organ, animal
        (artificial; vascularizable biomaterials for creation of
        three-dimensional tissues)
ΙT
     Transplant and Transplantation
        (autotransplant; vascularizable biomaterials for creation of
        three-dimensional tissues)
    Adrenal gland
ΙT
    Chondrocyte
    Fibroblast
    Muscle
     Osteocyte
       Pancreatic islet of Langerhans
        (culture of; vascularizable biomaterials for creation of
        three-dimensional tissues)
ΙΤ
     Blood vessel
        (endothelium, culture of; vascularizable biomaterials for creation of
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three-dimensional tissues)

ΙT Growth factors, animal RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (epithelial cell growth factors; vascularizable biomaterials for creation of three-dimensional tissues) TT Proteins, specific or class RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (extracellular matrix-assocd.; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Liver (hepatocyte, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Drug delivery systems (hydrogels; vascularizable biomaterials for creation of three-dimensional tissues) Polyesters, biological studies ΙT RL: BPR (Biological process); BSU (Biological study, unclassified); DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (hydroxycarboxylic acid-based; vascularizable biomaterials for creation of three-dimensional tissues) Prosthetic materials and Prosthetics TΤ (implants; vascularizable biomaterials for creation of three-dimensional tissues) ΙΤ Drug delivery systems (injections; vascularizable biomaterials for creation of three-dimensional tissues) ΙT (morphogenic factor; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Heart (myocyte, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙΤ (neuron, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Muscle (smooth, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Animal tissue (soft, defects in; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Cell (stem, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Thyroid gland (thyrocyte, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Kidney (tubule, culture of; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Collagens, biological studies RL: BPR (Biological process); BSU (Biological study, unclassified); DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (type I; vascularizable biomaterials for creation of three-dimensional tissues) ΙT Angiogenesis Animal tissue culture

Biocompatibility

Biological materials Cell adhesion Cell migration Particle size Porous materials Resorption, animal (vascularizable biomaterials for creation of three-dimensional tissues) ΤТ Adhesins Growth factors, animal Hormones, animal, biological studies Platelet-derived growth factors Transforming growth factors RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (vascularizable biomaterials for creation of three-dimensional tissues) ΙΤ Biopolymers Collagens, biological studies Fibronectins Fluoropolymers, biological studies Laminins Polyamides, biological studies Polycarbonates, biological studies Polyesters, biological studies Polyoxyalkylenes, biological studies Polyphosphazenes Polyurethanes, biological studies Vitronectin RL: BPR (Biological process); BSU (Biological study, unclassified); DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (vascularizable biomaterials for creation of three-dimensional tissues) ΙΤ (venule, of biocompatible pouch; vascularizable biomaterials for creation of three-dimensional tissues) ΙΤ Transplant and Transplantation (xenotransplant; vascularizable biomaterials for creation of three-dimensional tissues) 9061-61-4, Nerve growth factor 99896-85-2 106096-92-8, Acidic ΤТ fibroblast growth factor 106096-93-9, Basic fibroblast growth 127464-60-2, Vascular endothelial growth factor 110590-64-2 factor RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (vascularizable biomaterials for creation of three-dimensional tissues) 9002-89-5 9002-84-0 9003-01-4, Polyacrylic 9002-88-4, Polyethylene IΤ 9005-32-7, Alginic acid 9005-38-3D, 9003-05-8, Polyacrylamide Sodium alginate, RGD peptide conjugates 25087-26-7, Polymethacrylic acid 25104-18-1, Polylysine 25322-68-3 34346-01-5, Lactic acid-glycolic acid copolymer 38000-06-5, Polylysine 99896-85-2D, alginic acid conjugates 156461-57-3, Lactic acid-lysine 246867-28-7 copolymer RL: BPR (Biological process); BSU (Biological study, unclassified); DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (vascularizable biomaterials for creation of three-dimensional tissues) RE.CNT THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD RE (1) Barrera; J Am Chem Soc 1993, V115(23), P11010 HCAPLUS (2) Grande; J Biomed Materials Res 1997, V34, P211 HCAPLUS (3) Vacanti; US 5716404 A 1998

- AN 1999:644000 HCAPLUS
- TI Rapid publication Incompatibility between human blood and isolated islets of langerhans: a finding with implications for clinical intraportal islet transplantation?
- AU Bennet, William; Sundberg, Berit; Groth, Carl-Gustav; Brendel, Mathias D.; Brandhorst, Daniel; Brandhorst, Heide; Bretzel, Reinhardt G.; Elgue, Graciela; Larsson, Rolf; Nilsson, Bo; Korsgren, Olle
- CS Department of Transplantation Surgery Karolinska Institutet, Huddinge Hospital, Huddinge, S-141 86, Swed.
- SO Diabetes (1999), 48(10), 1907-1914 CODEN: DIAEAZ; ISSN: 0012-1797
- PB American Diabetes Association
- DT Journal
- LA English
- The remarkable difference in success rates between clin. pancreas AB transplantation and islet transplantation is poorly understood. Despite the same histocompatibility barrier and similar immunosuppressive treatments in both transplantation procedures, human intraportal islet transplantation has a much inferior success rate than does vascularized pancreas transplantation. Thus far, little attention has been directed to the possibility that islets transplanted into the blood stream may elicit an injurious incompatibility reaction. We have tested this hypothesis in vitro with human islets and in vivo with porcine islets. Human islets were exposed to nonanticoagulated human ABO-compatible blood in surface-heparinized polyvinyl chloride tubing loops. Heparin and/or the sol. complement receptor 1 (sCR1) TP10 were tested as additives. Adult porcine islets were transplanted intraportally into pigs, and the liver was recovered after 60 min for immunohistochem. staining. Human islets induced a rapid consumption and activation of platelets. Neutrophils and monocytes were also consumed, and the coagulation and complement systems were activated. Upon histol. examn., islets were found to be embedded in clots and infiltrated with CD11+ leukocytes. Furthermore, the cellular morphol. was disrupted. When heparin and sCR1 were added to the blood, these events were avoided. Porcine islets retrieved in liver biopsies after intraportal islet allotransplantation showed a morphol. similar to that of human islets perifused in vitro. Thus, exposure of isolated islets of Langerhans to allogenic blood resulted in significant damage to the islets, a finding that could explain the unsatisfactory clin. results obtained with intraportal islet transplantation. Because administration of heparin in combination with a sol. complement receptor abrogated these events, such treatment would presumably improve the outcome of clin. islet transplantation by reducing both initial islet loss and subsequent specific immune responses.
- RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD RE
- (1) Amirkhosravi, A; Thromb Haemost 1996, V75, P87 HCAPLUS
- (2) Baldwin, W; Transplantation 1995, V59, P797
- (3) Bandhorst, H; Cell Transplant 1998, V7, P489
- (4) Blachier, F; Biochim Biophys Acta 1988, V970, P222 HCAPLUS
- (5) Bottino, R; Diabetes 1998, V47, P316 HCAPLUS
- (6) Brauer, R; Transplantation 1995, V59, P288 MEDLINE
- (7) Carroll, M; Curr Opin Immunol 1997, V9, P64 HCAPLUS
- (8) Celi, A; Proc Natl Acad Sci USA 1994, V91, P8767 HCAPLUS
- (9) Fehsel, K; Diabetes 1993, V42, P496 HCAPLUS
- (10) Froberg, M; Hum Pathol 1997, V28, P1295 MEDLINE
- (11) Geppert, T; Crit Rev Immunol 1989, V9, P313 HCAPLUS
- (12) Goldman, H; Science 1976, V192, P1014 MEDLINE
- (13) Gong, J; J Clin Immunol 1996, V16, P222 MEDLINE

```
(14) Grotting, J; Am J Pathol 1978, V92, P653 MEDLINE
(15) Hering, B; Int Islet Transplant Registry Newsletter 1996, V7, P5
(16) Kehrel, B; Blood 1998, V15, P491
(17) Kirchhofer, D; Blood 1997, V89, P1270 HCAPLUS
(18) Larsson, R; Immunopharmacology 1997, V38, P119 HCAPLUS
(19) Mandrup-Poulsen, T; Allergy 1985, V40, P424 HCAPLUS
(20) Medzhitov, R; Curr Opin Immunol 1997, V9, P4 HCAPLUS
(21) Mehigan, D; Ann Surg 1980, V191, P287 MEDLINE
(22) Mittal, V; Transplantation 1981, V31, P302 MEDLINE
(23) Mollnes, T; Scand J Immunol 1985, V22, P703
(24) Moore, F; Adv Immunol 1994, V56, P267 HCAPLUS
(25) Niki, I; Biochem J 1990, V268, P713 HCAPLUS
(26) Nilsson, E; Scand J Immunol 1992, V35, P85
(27) Ostrovsky, L; Blood 1998, V15, P3028
(28) Peerschke, E; J Exp Med 1993, V178, P579 HCAPLUS
(29) Pratt, J; Am J Pathol 1996, V149, P2055 HCAPLUS
(30) Rabinovitch, A; J Clin Endocrinol Metab 1996, V81, P3197 HCAPLUS
(31) Ricordi, C; Diabetes 1986, V35, P649 HCAPLUS
(32) Sanchez, J; Thromb Res 1998, V89, P41 HCAPLUS
(33) Sever, C; Am J Pathol 1992, V140, P1255 MEDLINE
(34) Shapiro, A; Transplantation V59, P1060 MEDLINE
(35) Sims, P; Immunol Today 1991, V12, P338 HCAPLUS
(36) Stevens, R; Transplantation 1996, V61, P1740 HCAPLUS
(37) Sutherland, D; International Pancreas Transplant Registry 1997
(38) Van Deijnen, J; Cell Tissue Res 1994, V277, P115 HCAPLUS
(39) van Suylichem, P; Cell Transplantation 1995, V4, P609 MEDLINE
(40) Walsh, P; Blood 1981, V57, P106 MEDLINE
(41) Walsh, P; Blood 1986, V68, P225 HCAPLUS
(42) Weyrich, A; J Clin Invest 1996, V97, P1525 HCAPLUS
(43) Xenos, E; Transplantation 1994, V57, P1208 HCAPLUS
(44) Zimmet, P; J Diabetes Complications 1997, V11, P60 MEDLINE
    ANSWER 22 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
ΑN
    1999:451362 HCAPLUS
DN
    131:83976
     Regulated secretion from genetically engineered neuroendocrine cell lines
ΤI
     and its application for gene therapy of diabetes and hypoglycemia
ΙN
     Clark, Samuel A.; Thigpen, Anice E.
PA
     Betagene, Inc., USA
     PCT Int. Appl., 318 pp.
SO
    CODEN: PIXXD2
DT
     Patent
LA
     English
IC
     ICM C12N015-00
CC
     3-2 (Biochemical Genetics)
     Section cross-reference(s): 1, 2, 63
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PRAI US 1998-71193P
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                     A2 19980112 <--
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                     W
                           19990111 <--
     WO 1999-US633
                      W
     The present invention provides compns. and methods of comprising
AΒ
     engineered human neuroendocrine cell lines having a regulated secretory
     pathway. More particularly, the present invention provides methods and
     compns. for engineering regulated secretion into cells. Certain aspects
     of the invention provide glycemic sensing mechanisms to a population of
     genetically engineered cells. In particular embodiments, the present
     invention provides compns. and methods of providing indirect glycemic
     sensing mechanisms to a population of genetically engineered cells.
     Specifically contemplated are methods and compns. for engineering indirect
     glucose sensing and glucose counter regulation capacity into cells.
     Methods of using these cells for minimizing hypoglycemia in diabetic
     therapy are also disclosed. An engineered cell (.beta.G H03) derived from
     a human lung carcinoma has potential as an appropriate human cell line for
     allotransplantation and cell-based delivery of insulin
     and other peptide hormones. The .beta.G H03 cell line is sensitive to
     antibiotics and less susceptible to immunol. destruction than cells
     transplanted across species. Examples of a glucose
     counter-regulatory system include the following receptor/ligand pairs:
     .alpha.2-adrenergic receptor/epinephrine or Clonidine; somatostatin
     receptor/somatostatin or Octreotide; glucocorticoid
     receptor/glucocorticoids. Each of these receptor/ligand pairs function to
     inhibit secretion of a polypeptide hormone such as insulin from
     the cell, and can serve to protect patients treated with
     transplanted, insulin-secreting cells from hypoglycemia.
     neuroendocrine cell secretion genetic engineering; gene therapy diabetes
ST
     hypoglycemia neuroendocrine implant; insulin secretion
     neuroendocrine cell genetic engineering
ΙT
     Transport proteins
     RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (GLUT-2 (glucose-transporting, 2); regulated secretion from genetically
        engineered neuroendocrine cell lines and its application for gene
        therapy of diabetes and hypoglycemia)
ΙT
     Genetic element
     RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (IRES (internal ribosomal entry site) element; regulated secretion from
        genetically engineered neuroendocrine cell lines and its application
        for gene therapy of diabetes and hypoglycemia)
     Gastrointestinal hormones
IT
     RL: BPR (Biological process); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
        (PHM; regulated secretion from genetically engineered neuroendocrine
        cell lines and its application for gene therapy of diabetes and
        hypoglycemia)
ΙT
     Animal cell line
        (RIN; regulated secretion from genetically engineered neuroendocrine
        cell lines and its application for gene therapy of diabetes and
        hypoglycemia)
ΙΤ
     Glycoproteins, specific or class
     RL: BPR (Biological process); BSU (Biological study, unclassified); THU
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(Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(SAP (serum amyloid, P); regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Hormones, animal, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (amidated; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Receptors

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(calcium; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Intestine

(cecum; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Intestine

(colon; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Polarization

(depolarization, biol., secretion system regulated with; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Gastrointestinal hormone receptors

Gastrointestinal hormone receptors

Peptide receptors

Peptide receptors

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(gastric inhibitory polypeptide; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Drug delivery systems

(hydrogels; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Transformation, neoplastic

(immortalization; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Drug delivery systems

(implants; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Pancreatic islet of Langerhans

(insulinoma; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Genetic element

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(lexP site; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Drug delivery systems

(liposomes; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia)

IT Encapsulation

(microencapsulation; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) ΙΤ Endocrine system (neuroendocrine system; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) ΙT Proteins, specific or class RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pancreatic lipase-related; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) TΤ Hormone receptors RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (pancreatic polypeptide; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) IT Carboxylic acids, biological studies RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (phenolic, myco-, selectable marker; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) ΙT Genetic element RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (polyadenylation signal; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) ΙT Bladder Diabetes mellitus Digestive tract Gene therapy Hypoglycemia Liver Lung Pancreas Pancreatic islet of Langerhans Pituitary gland Retroviral vectors Secretion (process) Stomach Thyroid gland Virus vectors (regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) TT Enkephalins Neurophysins RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) ΤТ Glucagon-like peptide-1 receptors Glucocorticoid receptors Growth factors, animal Hepatocyte growth factor Muscarinic receptors Platelet-derived growth factors

Promoter (genetic element)

ΙT

IT

TΤ

ΙΤ

ΙΤ

ΙT

ΤТ

IT

ΙT

TΤ

Somatostatin receptors Sulfonylurea receptors Vasopressin receptors RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Enzymes, biological studies RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (secreted; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Dephosphorylation, biological Phosphorylation, biological (secretion system regulated with; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Calmodulins Fatty acids, biological studies Glycerides, biological studies RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (secretion system regulated with; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Antibiotic resistance (selectable marker; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Hormone receptors RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (urocortin; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Adeno-associated virus Human adenovirus Human herpesvirus Lentivirus (vector; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Pancreatic islet of Langerhans (.alpha.-cell; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Adrenoceptors RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (.alpha.1; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Adrenoceptors RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (.alpha.2; regulated secretion from genetically engineered neuroendocrine cell lines and its application for gene therapy of diabetes and hypoglycemia) Adrenoceptors Transforming growth factors

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL

IT

ΙT

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ΙT

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(Biological study); USES (Uses)
   (.beta.-; regulated secretion from genetically engineered
   neuroendocrine cell lines and its application for gene therapy of
   diabetes and hypoglycemia)
Pancreatic islet of Langerhans
   (.beta.-cell; regulated secretion from genetically
   engineered neuroendocrine cell lines and its application for gene
   therapy of diabetes and hypoglycemia)
Animal cell line
   (.beta.G H03; regulated secretion from genetically engineered
   neuroendocrine cell lines and its application for gene therapy of
   diabetes and hypoglycemia)
9005-32-7, Alginic acid
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
   (coating; regulated secretion from genetically engineered
   neuroendocrine cell lines and its application for gene therapy of
   diabetes and hypoglycemia)
50-99-7, Glucose, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
   (counter-regulatory system; regulated secretion from genetically
   engineered neuroendocrine cell lines and its application for gene
   therapy of diabetes and hypoglycemia)
                                       113-79-1, Arginine Vasopressin
50-56-6, Oxytocin, biological studies
1393-25-5, Secretin
                     9001-28-9, Blood-coagulation factor IX
                                                               9001-34-7,
Galactosidase 9001-62-1, Lipase 9002-60-2, ACTH, biological
          9002-61-3, Chorionic gonadotropin 9002-62-4, Prolactin,
                    9002-67-9, Luteinizing hormone 9002-68-0, hormone 9002-71-5, Thyroid-stimulating hormone
biological studies
Follicle-stimulating hormone
9002-72-6, Growth hormone 9004-02-8, Lipoprotein lipase
9004-10-8, Insulin, biological studies 9007-12-9,
             9007-92-5, Glucagon, biological studies
                                                       9011-97-6,
Cholecystokinin 9015-71-8, Corticotropin-releasing hormone 9026-93-1,
                     9031-14-5, Lecithin: cholesterol acyltransferase
Adenosine deaminase
9031-54-3, Sphingomyelinase 9032-75-1, Polygalacturonidase
                                                               9033-06-1,
              9034-39-3, Growth hormone-releasing factor
                                                           9034-40-6,
Glucosidase
LH-releasing hormone
                     9034-42-8, .beta.-Melanocyte-stimulating hormone
9034-50-8, Vasotocin
                     9035-54-5, Placental lactogen
                                                       9035-55-6,
Lipotropin
             9041-90-1, Angiotensin I 9045-90-3, Gastrin I
                                                              11128-99-7.
                 20988-64-1, Cholecystokinin-(27-33) 24305-27-9,
Angiotensin II
                               33507-63-0, Substance P
                                                          37213-49-3,
Thyrotropin-releasing hormone
.alpha.-Melanocyte-stimulating hormone
                                        37221-79-7, Vasoactive intestinal
        51110-01-1, Somatostatin 59392-49-3, Gastric
peptide
                     59763-91-6, Pancreatic polypeptide
                                                          60254-82-2
inhibitory peptide
60617-12-1, .beta.-Endorphin 80043-53-4, Gastrin-releasing peptide
82785-45-3, Neuropeptide Y 83652-28-2, Calcitonin gene-related peptide
                          88506-29-0, Adrenorphin
86933-74-6, Neurokinin A
                                                     89750-14-1,
Glucagon-like peptide I
                          98824-26-1, .beta.-Calcitonin gene-related
peptide
         98897-20-2, 5-28-Human Atrial natriuretic factor
                                                             106388-42-5,
Peptide YY 106602-62-4, Amylin 107444-51-9, Human
Glucagon-like peptide-1 (7-36 amide) 117148-67-1, Pancreastatin
                      120298-73-9, Human PTHrP-(1-40)
                                                         123626-67-5,
119418-04-1, Galanin
Endothelin I
               127120-75-6, Galanin message-associated peptide
137348-10-8, Human PTHrP(107-139)
                                    138949-73-2, Human PTHrP-(107-111)
169494-85-3, Leptin 229483-36-7
RL: BPR (Biological process); BSU (Biological study, unclassified); THU
(Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
   (regulated secretion from genetically engineered neuroendocrine cell
   lines and its application for gene therapy of diabetes and
   hypoglycemia)
50-23-7, Cortisol
                    51-41-2, Norepinephrine
                                            51-43-4, Epinephrine
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9001-36-9, Glucokinase 11000-17-2, Vasopressin 62031-54-3, Fibroblast

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62229-50-9, Epidermal growth factor 67763-96-6,
    growth factor
    Insulin-like growth factor 1 127464-60-2, Vascular endothelial
    growth factor
    RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (regulated secretion from genetically engineered neuroendocrine cell
       lines and its application for gene therapy of diabetes and
       hypoglycemia)
                     56-65-5, 5'-ATP, biological studies
                                                           58-64-0, 5'-ADP,
    53-57-6, NADPH
    biological studies 58-68-4, NADH 60-92-4, CAMP 7440-70-2, Calcium,
    biological studies
                       10102-43-9, Nitric oxide, biological studies
    RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (secretion system regulated with; regulated secretion from genetically
       engineered neuroendocrine cell lines and its application for gene
       therapy of diabetes and hypoglycemia)
    53-79-2, Puromycin
                         1404-04-2, Neomycin
                                               6379-56-2, Hygromycin
    9002-03-3, Dihydrofolate reductase 9002-06-6, Thymidine kinase
    9016-12-0, Guanosine phosphoribosyltransferase 9025-05-2, Cytosine
    deaminase 9028-27-7, Histidinol dehydrogenase 9037-41-6,
                                             54576-55-5, Blasticidin S
    Nitroreductase
                     11056-06-7, Bleomycin
               58798-67-7, Blasticidin 62213-36-9, Neomycin
    deaminase
    phosphotransferase
                        87110-39-2, Puromycin acetyltransferase
    181494-14-4, Zeocin
    RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (selectable marker; regulated secretion from genetically engineered
       neuroendocrine cell lines and its application for gene therapy of
       diabetes and hypoglycemia)
    ANSWER 23 OF 49 HCAPLUS COPYRIGHT 2002 ACS
    1999:219716 HCAPLUS
    130:234346
    Compositions and method of stimulating the proliferation and
    differentiation of human fetal and adult pancreatic cells ex vivo
    Rubin, Jeffrey; Hayek, Alberto; Beattie, Gillian Marguerite; Otonkoski,
    Timo Pyry Juhani; Quaranta, Vito
    United States Dept. of Health and Human Services, USA; The Whittier
    Institute for Diabetes and Endocrinology
    U.S., 20 pp., Cont.-in-part of U.S. 5,587,309.
    CODEN: USXXAM
    Patent
    English
    ICM A01N001-02
    ICS C12N005-08; C07K016-24; A61K038-19
    435366000
    9-11 (Biochemical Methods)
    Section cross-reference(s): 11, 13, 14, 63
FAN.CNT 3
                    KIND DATE
                                         APPLICATION NO. DATE
    PATENT NO.
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                                          _____
                                                          -----
    _____
                    A 19990330
                                         US 1997-732230
                                                          19970414 <--
    US 5888705
                                                           19940429 <--
    US 5587309 A 19961224
WO 9529989 A1 19951109
                                         US 1994-235394
                                          WO 1995-US5521
                                                           19950428 <--
        W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
            GB, GE, HU, IS, JP, KE, KG
        RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
            LU, MC, NL, PT, SE, BF, BJ
PRAI US 1994-235394
                    A2 19940429 <--
                          19950428 <--
    WO 1995-US5521
                     W
    A method of inducing the proliferation and/or differentiation of human
    adult pancreatic cells entails contacting primary cultures of such cells
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with Hepatocyte Growth Factor/Scatter Factor (HGF/SF), thereby inducing a

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cells ex vivo)

proliferation of .beta.-epithelial cells, an increase in the no. of .beta.-epithelial cells which form islet-like cell clusters, and an increase in insulin prodn. per cell. The method is improved by culturing the cells on an extracellular matrix such as 804G in the presence of HGF/SF, and is further improved by reaggregating thus-treated cells and contacting said cells with an insulin gene upregulating agent such as a poly(ADP-ribose) synthetase inhibitor such as a nicotinamide or benzamide. The method provides increased nos. of functional islet-like cell clusters for transplantation. pancreas B cell culture proliferation differentiation transplant Extracellular matrix (804G and BCEM; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Animal cell line (804G; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Animal cell line (BCEM (bovine corneal endothelium cell); compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Transforming growth factors RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses) (antibodies to; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Animal tissue culture Bioreactors Cell differentiation Cell proliferation Pancreas Transplant and Transplantation (compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Hormones, animal, biological studies RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Hepatocyte growth factor RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses) (compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) (cornea, endothelium; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) (expression; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Embryo, animal (fetus; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Gene, animal RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(for insulin; compns. and method of stimulating the

proliferation and differentiation of human fetal and adult pancreatic

ΙT Diabetes mellitus (insulin-dependent; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) Transplant and Transplantation TΤ (pancreatic islet; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) TΤ Animal tissue culture (primary; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) TT Antibodies RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses) (to TGF-.beta.; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) TT Pancreatic islet of Langerhans (transplant; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) ΙT Pancreatic islet of Langerhans (.beta.-cell; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) 9061-61-4, Nerve growth hormone 61912-98-9, Insulin ΙT 62229-50-9, Epidermal growth factor -like growth factor 106096-93-9, Basic fibroblast growth factor 148348-15-6, Fibroblast growth factor 7 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) 55-21-0, Benzamide 98-92-0, Nicotinamide ΙT RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses) (compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) 9004-10-8, Insulin, biological studies IT RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process) (compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) 9055-67-8, Poly(ADP-ribose) synthetase ΙT RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses) (inhibitor; compns. and method of stimulating the proliferation and differentiation of human fetal and adult pancreatic cells ex vivo) THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT RE (1) Kneteman, N; Diabetes 1989, V38(3), P386 HCAPLUS (2) Otonkoski, T; J Clin Invest 1993, V92, P1459 HCAPLUS (3) Quaranta; US 5510263 1996 HCAPLUS (4) Rubin; US 5587309 1996 HCAPLUS L65 ANSWER 24 OF 49 HCAPLUS COPYRIGHT 2002 ACS 1998:719068 HCAPLUS AN129:335819 DN Bioartificial devices and cellular matrixes therefor

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ΙN
    Usala, Anton-lewis
    Encelle Inc, USA
PΑ
    U.S., 34 pp., Cont.-in-part of U.S. Ser. No. 300,429, abandoned.
SO
    CODEN: USXXAM
DT
    Patent
    English
T.A
IC
    ICM A61F002-02
    ICS A61K047-30; C12N011-04
NCL
    424424000
    63-7 (Pharmaceuticals)
CC
    Section cross-reference(s): 16
FAN.CNT 12
                                         APPLICATION NO. DATE
    PATENT NO.
                    KIND DATE
                    ____
                                         _____
                                       US 1995-568694 19951207 <--
                          19981103
PΙ
    US 5830492
                    А
    CA 2239498
                     AA 19970612
                                         CA 1996-2239498 19961114 <--
                                         WO 1996-US18209 19961114 <--
    WO 9720569
                     A2 19970612
           AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
            CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP,
            KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
            MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, TJ, TM,
            TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
            IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
            MR, NE, SN, TD, TG
                           19970627
                                         AU 1997-11192
                                                          19961114 <--
    AU 9711192
                     A1
                           20000106
    AU 714465
                      В2
    EP 865288
                      Α2
                           19980923
                                         EP 1996-941993
                                                         19961114 <--
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, FI
    JP 2000507202
                           20000613
                                          JP 1997-521275
                                                          19961114 <--
                      Т2
                                          ZA 1996-10297
                                                          19961206 <--
    ZA 9610297
                      Α
                           19970618
PRAI US 1992-841973
                     В2
                         19920224 <--
    US 1994-300429
                     В2
                         19940902 <--
                           19951207 <--
    US 1995-568694
                     Α
                           19961114 <--
    WO 1996-US18209 W
    A device for the effective release of cellular moieties, including
AΒ
    hormones, wherein a matrix contg. a hormone producing cellular moiety is
    encapsulated with a non-immunogenic polymeric material of
    poly-para-xylylene or other arom. based moiety having a membrane portion
    with a porosity blocking passage of immunogenic agents and permitting
    passage of effective nutrients for said cellular moiety and the hormone
    produced thereby, an improved matrix for the storage, manuf., functional
    testing, and viral infection testing of cellular moieties wherein a
    collagen based hydrogel is processed to present a liq. phase at host temp.
    and functions as a substrate for cellular attachment with additives
    effective for limiting thermal and pressure trauma, and an improved method
    for the harvesting tissue from organs. A membrane of poly-p-xylylene was
    mount on a cylindrical sleeve and immersed in water. For an implantable
    bioartificial pancreatic device, the cellular moiety contains a plurality
    of insulin-producing islets.
ST
    bioartificial device cellular matrix; pancreatic islet bioartificial
    device
ΙT
    Cryopreservation
       Transplant and Transplantation
        (bioartificial devices and cellular matrixes)
    Enzymes, biological studies
ΙT
    RL: DEV (Device component use); PEP (Physical, engineering or chemical
    process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
    USES (Uses)
        (bioartificial devices and cellular matrixes)
ΙT
    Transplant and Transplantation
```

(pancreatic islet; bioartificial devices and

cellular matrixes)

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ΙT
     Pancreatic islet of Langerhans
        (transplant; bioartificial devices and cellular matrixes)
IT
     9001-12-1, Collagenase 9001-92-7, Protease 9002-07-7, Trypsin
                                  25722-33-2, Poly-p-xylylene
     9042-14-2, Dextran sulfate
                                                                193363-31-4,
     Liberase
     RL: DEV (Device component use); PEP (Physical, engineering or chemical
     process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
     USES (Uses)
        (bioartificial devices and cellular matrixes)
ΤТ
     52-90-4, Cysteine, biological studies
                                             56-89-3, Cystine, biological
               74-79-3D, L-Arginine, analogs, biological studies 79-17-4,
                     157-06-2, D-Arginine
                                                         9004-54-0, Dextran,
     Aminoquanidine
                                             2149-70-4
     biological studies 9005-49-6, Heparin, biological
                           125978-95-2, Nitric oxide synthase
               17035-90-4
     RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological
     study); USES (Uses)
        (bioartificial devices and cellular matrixes)
     10102-43-9, Nitric oxide, biological studies
ΙT
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (inhibitors; bioartificial devices and cellular matrixes)
RE.CNT
              THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; WO 9219195 1992 HCAPLUS
(2) Anon; WO 9316685 1993 HCAPLUS
(3) Anon; WO 9519430 1995 HCAPLUS
(4) Lacy; US 5079160 1992
(5) Metrakos, P; Collagen Gel Matrix Promoters Islet Cell Proliferation,
    Trnasplantaion Proceeds 1994, V26(6), P3349 HCAPLUS
(6) Metrakos, P; Collagen Gel Matrix Promotes Islet Cell Proliferation 1994
(7) Parisius; US 4797213 1989
(8) Scharp; US 4868121 1989
(9) Scharp; US 5322790 1994
L65 ANSWER 25 OF 49 HCAPLUS COPYRIGHT 2002 ACS
ΑN
     1998:681820 HCAPLUS
DN
     130:57152
TI
     Reversal of hyperglycemia in streptozotocin diabetic mice by
     xenotransplantation of microencapsulated rat islets
ΑU
     Tatarkiewicz, Krystyna; Sitarek, Elzbieta; Sabat, Marek; Orlowski, Tadeusz
CS
     Institute of Biocybernetics and Biomedical Engineering, Warsaw, Pol.
SO
     Annals of Transplantation (1997), 2(2), 20-23
     CODEN: ANTRF6; ISSN: 1425-9524
PΒ
     PRESSMED
DT
     Journal
LA
     English
     63-7 (Pharmaceuticals)
CC
     Section cross-reference(s): 2, 14
AB
     Rat pancreatic islets were immunoisolated within alginate capsules with
     addnl. polyethyleneimine-protamine-heparin highly biocompatible
     membrane. Perifusion study in vitro demonstrated satisfactory
     similarities between the insulin release profiles of
     encapsulated and free islets. Concordant xenotransplantation of
     microencapsulated rat islets significantly prolonged mean time of restored
     normoglycemia (46.+-.15 days) in streptozotocin-diabetic BALB/c mice
     recipients comparing to uncoated grafts (7.+-.2 days).
ST
     artificial pancreas xenotransplant islet alginate microcapsule
     coating
     Pancreas
ΤТ
     Pancreas
        (artificial; reversal of hyperglycemia in streptozotocin diabetic mice
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by xenotransplantation of microencapsulated rat islets)

TΤ Protamines ΙT

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RL: DEV (Device component use); PEP (Physical, engineering or chemical
    process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
        (coating component; reversal of hyperglycemia in streptozotocin
        diabetic mice by xenotransplantation of microencapsulated rat
        islets)
     Encapsulation
        (microencapsulation; reversal of hyperglycemia in streptozotocin
        diabetic mice by xenotransplantation of microencapsulated rat
        islets)
     Transplant and Transplantation
        (pancreatic islet; reversal of hyperglycemia in
        streptozotocin diabetic mice by xenotransplantation of
        microencapsulated rat islets)
     Diabetes mellitus
        (reversal of hyperglycemia in streptozotocin diabetic mice by
        xenotransplantation of microencapsulated rat islets)
     Pancreatic islet of Langerhans
        (transplant; reversal of hyperglycemia in streptozotocin
        diabetic mice by xenotransplantation of microencapsulated rat
        islets)
     Transplant and Transplantation
        (xenotransplant; reversal of hyperglycemia in streptozotocin
        diabetic mice by xenotransplantation of microencapsulated rat
        islets)
     9002-98-6 9005-49-6, Heparin, biological studies
    RL: DEV (Device component use); PEP (Physical, engineering or chemical
    process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
     USES (Uses)
        (coating component; reversal of hyperglycemia in streptozotocin
        diabetic mice by xenotransplantation of microencapsulated rat
        islets)
     9005-35-0, Calcium alginate
    RL: DEV (Device component use); PEP (Physical, engineering or chemical
    process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);
     USES (Uses)
        (reversal of hyperglycemia in streptozotocin diabetic mice by
        xenotransplantation of microencapsulated rat islets)
RE.CNT
              THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Ar Rajab, A; Transplantation 1991, V51, P570 HCAPLUS
(2) Calafiore, R; ASAIO Journal 1992, V38, P34 MEDLINE
(3) Clayton, H; Transplant Proc 1992, V24, P956 HCAPLUS
(4) Cole, D; Horm metab Res 1993, V25, P553 HCAPLUS
(5) Fan, M; Diabetes 1990, V39, P519 MEDLINE
(6) Fiedor, P; Pancreas 1994, V9, P670 MEDLINE
(7) Fritschy, W; Diabetologta 1991, V34, P542 HCAPLUS
(8) Horcher, A; Trans Proc 1994, V26, P784 MEDLINE
(9) Iwata, H; J Biomed Mat Res 1994, V28, P1201 HCAPLUS
(10) Kloeck, G; Appl Microbiol Biotechnol 1994, V40, P638 HCAPLUS
(11) Krestow, M; Transplantation 1991, V51, P651 MEDLINE
(12) Latif, Z; Transplantation 1988, V45, P827 HCAPLUS
(13) Lim, F; Science 1980, V210, P908 HCAPLUS
(14) Lum, Z; Transplantation 1992, V53, P1180 MEDLINE
(15) Mazaheri, R; Transplantation 1991, V51, P750 MEDLINE
(16) Sawhney, A; Biomaterials 1992, V13, P863 HCAPLUS
(17) Sitarek, E; Bull Pol Ac Sc: Biol Sc 1993, V41, P117
(18) Soon-Shiong, P; Transplant Proc 1991, V23, P758 MEDLINE
(19) Sun, A; ASAIO Journal 1992, V38, P125 MEDLINE
(20) Sun, A; Progress in Artificial Organs 1983, P769
(21) Tatarkiewicz, K; Artif Organs 1994, V18, P736 HCAPLUS
```

(22) Weber, C; Transplant Proc 1991, V23, P764 MEDLINE (23) Weber, C; Transplant Proc 1993, V25, P462 MEDLINE

```
(24) Weber, C; Transplantation 1990, V49, P396 MEDLINE
    ANSWER 26 OF 49 HCAPLUS COPYRIGHT 2002 ACS
T<sub>1</sub>65
AN
    1998:144291 HCAPLUS
DN
    128:241404
    Comparison of two methods of pancreas islets immunoisolation
ΤI
    Orlowski, T.; Sitarek, E.; Tatarkiewicz, K.; Sabat, M.; Antosiak, M.
ΑU
CS
    Warsaw School of Medicine, Transplantation Institute, Warsaw, Pol.
SO
     International Journal of Artificial Organs (1997), 20(12),
     701-703
    CODEN: IJAODS; ISSN: 0391-3988
PΒ
    Wichtig Editore
DT
    Journal
LA
    English
CC
     9-4 (Biochemical Methods)
    Section cross-reference(s): 14
AB
    The efficacy of two methods of Langerhans islets
     immunoisolation was compared. For this purpose the function of
    islets encapsulated with alginate/polyethylenimin/protamine/
    heparin (APPH) or with alginate/poly-L-lysine/alginate (APA)
    membranes was assessed: in vitro according to their survival and response
    to glucose challenges, and in vivo according to their capability to
    provide sufficient insulin delivery to maintain normal fasting
    blood glucose following xenotransplantation to streptozotocin
    diabetic mice. In vitro insulin secretion the response to
    glucose challenge of APPH and APA encapsulated rat islets
    reversed the diabetic state of streptozotocin diabetic mice for a longer
    period, than APPH islet grafts. This study clearly
    demonstrated the inadequacy of in vitro methods in the prediction of in
    vivo results of islets transplantation.
    pancreas islet immunoisolation transplantation
    microencapsulation
ΙT
    Pancreatic islet of Langerhans
       Transplant and Transplantation
        (immunoisolation of pancreas islets with
        alginate/polyethylenimin/protamine/heparin and
        alginate/poly-L-lysine/alginate microencapsulation)
ΙT
    Encapsulation
        (microencapsulation; immunoisolation of pancreas islets with
        alginate/polyethylenimin/protamine/heparin and
        alginate/poly-L-lysine/alginate microencapsulation)
ΙT
     Protamines
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (sulfates; immunoisolation of pancreas islets with
        alginate/polyethylenimin/protamine/heparin and
        alginate/poly-L-lysine/alginate microencapsulation)
TT
     50-99-7, D-Glucose, biological studies
    RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
    BIOL (Biological study); OCCU (Occurrence)
        (blood; immunoisolation of pancreas islets with
        alginate/polyethylenimin/protamine/heparin and
        alginate/poly-L-lysine/alginate microencapsulation)
                                                7647-14-5, Sodium chloride,
                              103-47-9, CHES
TΤ
     68-04-2, Sodium citrate
    biological studies
                         9002-98-6, Polyethylenimine 9004-10-8,
                                   9005-38-3, Sodium alginate
     Insulin, biological studies
    9005-49-6, Heparin, biological studies 10043-52-4,
    Calcium chloride (CaCl2), biological studies
                                                    25104-18-1, Poly-L-lysine
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (immunoisolation of pancreas islets with alginate/polyethylenimin/prota
        mine/heparin and alginate/poly-L-lysine/alginate
        microencapsulation)
```

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1998:15958 HCAPLUS
ΑN
    128:93200
DN
    Immobilized organic material with defined active substance release
TI
    Wagner, Karl-Heinz; Naarmann, Herbert
ΙN
    Wagner, Karl-Heinz, Germany; Naarmann, Herbert
PΑ
SO
    Ger. Offen., 10 pp.
    CODEN: GWXXBX
DT
    Patent
    German
LA
IC
    ICM C07K017-00
    ICS C07K014-62; C07K014-815; A61K038-58; A61K038-28; A61K031-725
CC
    63-6 (Pharmaceuticals)
FAN.CNT 1
    PATENT NO.
                    KIND DATÉ
                                         APPLICATION NO. DATE
    _______
                                          _____
                                                          ______
                     A1 19971218 DE 1996-19623440 19960612 <--
PΙ
    DE 19623440
AΒ
    A bioartificial pancreas for transplantation into human diabetic
    patients comprises a vascular implant contg. immobilized insulin
    , proinsulin, preproinsulin, pancreatic islet cells, or APUD cells.
    implant preferably contains anticoagulants, antithrombotics, leukocyte
    adhesion inhibitors, and inhibitors of complement activation and of
    protein adsorption. Thus, rat pancreatic islet cells were encapsulated in
    microporous silicone capillary catheters (diam. 500-600 .mu.m; mol. cutoff
    50-140 kD) which were implanted in the right cardiac ventricle of a dog.
    Examn. after 4 wk showed that the encapsulated islet cells received
    adequate nutrition and oxygenation. Parallel in vitro expts. demonstrated
    insulin secretion by the encapsulated islet cells, which was
    stimulated by glucose loading.
ST
    islet cell immobilization artificial pancreas; encapsulation islet cell
    silicone catheter; vascular implant islet cell immobilization
ΙT
        (adhesion of components of, inhibition of; immobilized org. material
       with defined active substance release)
ΙT
    Blood vessel
       (artificial; immobilized org. material with defined active substance
       release)
ΙΤ
    Electric potential
        (biol., controlled release in response to; immobilized org. material
       with defined active substance release)
    Macromolecular compounds
ΤТ
    RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological
    study); USES (Uses)
        (biol.; immobilized org. material with defined active substance
       release)
ΙT
    Respiration, animal
        (by implanted cells; immobilized org. material with defined active
       substance release)
ΙΤ
    Medical goods
        (catheters; immobilized org. material with defined active substance
       release)
TΨ
    Medical goods
    Medical goods
        (fabrics; immobilized org. material with defined active substance
       release)
ΤТ
    Drug delivery systems
        (films; immobilized org. material with defined active substance
       release)
TΤ
    Drug delivery systems
        (foams; immobilized org. material with defined active substance
       release)
ΙT
    Carotid body
        (glomus cell; immobilized org. material with defined active substance
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release)

#### ΤТ Anticoaqulants Blood vessel Immobilization, biochemical Pancreatic islet of Langerhans Polar molecules Porous materials (immobilized org. material with defined active substance release) Carbon fibers, biological studies ΤТ Macromolecular compounds Polymers, biological studies RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (immobilized org. material with defined active substance release) ΙT Drug delivery systems Drug delivery systems (implants, controlled-release; immobilized org. material with defined active substance release) ΙT Drug delivery systems Drug delivery systems (microcapsules, controlled-release; immobilized org. material with defined active substance release) ΙT Polysiloxanes, biological studies RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (microporous, catheters; immobilized org. material with defined active substance release) ΙT Porous materials (microporous; immobilized org. material with defined active substance release) ΙT Adhesion, biological (of blood components, inhibition of; immobilized org. material with defined active substance release) ΙΤ Medical goods (pads; immobilized org. material with defined active substance release) ΙΤ Transplant and Transplantation (pancreatic islet; immobilized org. material with defined active substance release) ΙΤ Medical goods (sponges; immobilized org. material with defined active substance release) ΙT Medical goods (tubes; immobilized org. material with defined active substance release) 8001-27-2, Hirudin 9004-10-8, ΙT 435-97-2, Marcumar Insulin, biological studies 9005-49-6, Heparin , biological studies 9035-68-1, Proinsulin 61116-24-3, Preproinsulin RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (immobilized org. material with defined active substance release) ANSWER 28 OF 49 HCAPLUS COPYRIGHT 2002 ACS 1.65 1997:650432 HCAPLUS ΑN 127:231585 DN Storage articles for prolonged viability and function of living cells TΙ Soon-Shiong, Patrick; Desai, Neil P.; Moloney, Molly; Yao, Qiang X. IN Vivorx Pharmaceuticals, Inc., USA; Soon-Shiong, Patrick; Desai, Neil P.; PΑ Moloney, Molly; Yao, Qiang X. SO PCT Int. Appl., 32 pp. CODEN: PIXXD2 DТ Patent

LA

English

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ICM C12N005-06
ΙC
    ICS C12N011-10; C12N011-04
CC
    9-1 (Biochemical Methods)
    Section cross-reference(s): 14, 63
FAN.CNT 1
                    KIND DATE
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                                    WO 1997-US1731 19970130 <--
    WO 9735958 A1 19971002
PΙ
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            LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
            RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
            AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
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            MR, NE, SN, TD, TG
                     A1 19971017
                                         AU 1997-18552 19970130 <--
    AU 9718552
PRAI US 1996-622063
                          19960326 <--
    WO 1997-US1731
                           19970130 <--
    An article has been developed which unexpectedly prolongs the viability of
AΒ
    living cells or cell aggregates and which maintains the biol. function and
    viability of the stored cells for very long periods of time. Also
    provided is a novel method of storing and culturing cells which is esp.
    useful for accumulating large nos. of cells for therapeutic purposes,
    including transplantation into human patients to alleviate
    disease processes. The invention method involves surrounding cells or
    cell aggregates with a suitable cell-protective layer, thereby providing
    articles of various sizes and shapes.
    storage article viability function living cell
ST
ΙT
    Cell
    RL: ANT (Analyte); ANST (Analytical study)
        (Living; storage articles for prolonged viability and function of
       living cells)
    Blood vessel
ΙT
    RL: ANT (Analyte); ANST (Analytical study)
        (Vassopressor; storage articles for prolonged viability and function of
       living cells)
    Immunology
ΙT
    RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
     (Biological study); FORM (Formation, nonpreparative)
        (active factor; storage articles for prolonged viability and function
       of living cells)
    Storage
TΤ
    RL: ANT (Analyte); ANST (Analytical study)
        (articles; storage articles for prolonged viability and function of
       living cells)
TT
    Endocrine system
    RL: ANT (Analyte); ANST (Analytical study)
        (cell; storage articles for prolonged viability and function of living
       cells)
ΙT
    Pancreatic islet of Langerhans
    Thyroid gland
    RL: ANT (Analyte); ANST (Analytical study)
        (cells; storage articles for prolonged viability and function of living
       cells)
ΙT
    Endocrine system
    RL: ANT (Analyte); ANST (Analytical study)
        (chromaffin system, cell; storage articles for prolonged viability and
        function of living cells)
ΙT
    Liver
        (hepatocyte; storage articles for prolonged viability and function of
        living cells)
ΙT
    Skin
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RL: ANT (Analyte); ANST (Analytical study)
        (keratinocyte; storage articles for prolonged viability and function of
        living cells)
ΙT
    Nerve
     RL: ANT (Analyte); ANST (Analytical study)
        (neuron; storage articles for prolonged viability and function of
        living cells)
TΤ
     Nucleic acids
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (poly-; storage articles for prolonged viability and function of living
        cells)
IT
     Cell
     RL: ANT (Analyte); ANST (Analytical study)
        (stem; storage articles for prolonged viability and function of living
        cells)
ΙT
     Transplant and Transplantation
        (storage articles for prolonged viability and function of living cells)
TT
    Animal tissue culture
       Anticoagulants
     Epithelium
     Eukaryote (Eukaryotae)
     Hematopoietic precursor cell
     Immune system
    Muscle
    Neoplasm
    RL: ANT (Analyte); ANST (Analytical study)
        (storage articles for prolonged viability and function of living cells)
IΤ
    Blood-coagulation factors
    Cytokines
    Enzymes, biological studies
     Fibrinolytics
    Growth factors, animal
    Hormones, animal, biological studies
    Interferons
    Neurotransmitters
    Opioids
    RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
     (Biological study); FORM (Formation, nonpreparative)
        (storage articles for prolonged viability and function of living cells)
IT
    Lipids, biological studies
    Polyamides, biological studies
     Polyesters, biological studies
     Polymers, biological studies
     Polyoxyalkylenes, biological studies
     Polysaccharides, biological studies
    RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (storage articles for prolonged viability and function of living cells)
ΙT
     Interferons
     RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
     (Biological study); FORM (Formation, nonpreparative)
        (.gamma.; storage articles for prolonged viability and function of
        living cells)
     9003-01-4, Polyacrylic acid
ΙT
     RL: ANT (Analyte); ANST (Analytical study)
        (storage articles for prolonged viability and function of living cells)
ΙT
     51-41-2, Norepinephrine
                              51-43-4, Adrenalin
                                                   51-61-6, Dopamine,
                        1407-47-2, Angiotensin
     biological studies
                                                   9001-27-8, Factor viii
     9001-28-9, Factor ix
                           9002-01-1, Streptokinase 9004-10-8,
     Insulin, biological studies 9005-49-6, Heparin
     , biological studies 9035-68-1, Proinsulin
                                                  9039-53-6,
    Urokinase
                 9054-89-1, Superoxide dismutase
                                                   9061-61-4, Nerve growth
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11096-26-7, Erythropoietin 51110-01-1, Somatostatin
    62683-29-8, Colony stimulating factor 139639-23-9, Tissue plasminogen
    activator
    RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL
     (Biological study); FORM (Formation, nonpreparative)
        (storage articles for prolonged viability and function of living cells)
    9002-89-5, Polyvinyl alcohol 9003-05-8, Polyacrylamide 9003-39-8,
ΤТ
                              9005-32-7D, Alginic acid, polymer
                                                                 56688-68-7,
    Polyvinyl pyrrolidinone
     .alpha.-L-Guluronic acid
    RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (storage articles for prolonged viability and function of living cells)
    ANSWER 29 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
ΑN
    1997:450109 HCAPLUS
    127:60628
DN
    Combination therapeutic methods employing nitric oxide scavengers
TΙ
ΙN
    Lai, Ching-San
    Medinox, Inc., USA; Lai, Ching-San
PA
SO
    PCT Int. Appl., 62 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
ΙC
    ICM A61K031-325
CC
    1-12 (Pharmacology)
    Section cross-reference(s): 63
FAN.CNT 2
    PATENT NO.
                   KIND DATE
                                        APPLICATION NO. DATE
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    _____
                                         _____
                                                          _____
                                     WO 1996-US18124 19961112 <--
    WO 9718805
                    A1 19970529
PΙ
        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
            DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
            RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
            AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
            IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
            MR, NE, SN, TD, TG
                                          US 1995-561594
                           19980505
    US 5747532
                                                           19951121 <--
                     Α
    CA 2238028
                                          CA 1996-2238028
                                                          19961112 <--
                           19970529
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                           19970611
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                                                           19961112 <--
    AU 9676784
                     Α1
                           19980930
                                          EP 1996-939670
                                                           19961112 <--
    EP 866695
                      A1
           AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, FI
                           19981223
                                          CN 1996-198435
                                                           19961112 <--
    CN 1202824
                      Α
                      T2
                           20000118
                                          JP 1997-519776
                                                           19961112 <--
    JP 2000500493
    AU 9869984
                      A1
                           19980730
                                          AU 1998-69984
                                                           19980609 <--
    AU 722361
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                     A2
PRAI US 1995-561594
                           19951121
                                     <--
    US 1996-12820P
                      Ρ
                           19960305
                                     <--
    WO 1996-US18124
                      W
                           19961112
                                    <--
    MARPAT 127:60628
OS
AB
    Combination therapeutic methods are provided for the in vivo inactivation
    or inhibition of formation (either directly or indirectly) of species
    which induce the expression of nitric oxide synthase, as well as reducing
    nitric oxide levels produced as a result of NO synthase expression. In
    contrast to the inhibitory approach described in the prior art (i.e.,
    wherein the function of the enzymes responsible for nitric oxide prodn. is
    inhibited), the present invention employs a combination of inactivation
    (or inhibition) and scavenging approaches, whereby the stimulus of nitric
    oxide synthase expression is inactivated, or the prodn. thereof is
    inhibited, and overproduced nitric oxide is bound in vivo to a suitable
    nitric oxide scavenger. The resulting complexes render the stimulus of
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nitric oxide synthase expression inactive (or inhibit the prodn. thereof), and nitric oxide harmless. The resulting complexes are eventually excreted in the urine of the host. Also provided are compns. and formulations useful for carrying out the above methods. ST NO synthase inhibitor combination therapeutic; nitric oxide scavenger combination therapeutic Proteins, specific or class TΤ RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (BPI (bactericidal/permeability-increasing); nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Intestine, disease (Crohn's, therapeutic agents for; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Complement (activation, inhibitors; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) Transplant and Transplantation IΤ Transplant and Transplantation (allotransplant, heart; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) TΤ Heart Heart (allotransplant; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Interleukin 1 receptors Platelet-activating factor receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (antagonists; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Interleukin 6 Tumor necrosis factors RL: BSU (Biological study, unclassified); BIOL (Biological study) (antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Tear (ocular fluid) (artificial; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Ion channel blockers Ion channel blockers (calcium, dihydropyridine; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Drug delivery systems (drops; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) TΤ Drug delivery systems (emulsions; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Toxins RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (endotoxins; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Drug delivery systems (inhalants; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Drug delivery systems (injections, i.v.; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Drug delivery systems (injections, s.c.; nitric oxide-scavenging and nitric oxide

synthase-inhibiting combinations for therapeutic use)

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Proteins, specific or class
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (iron-contq.; nitric oxide-scavenging and nitric oxide
        synthase-inhibiting combinations for therapeutic use)
ΙT
    Proteins, specific or class
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (lipopolysaccharide-binding, sol.; nitric oxide-scavenging and nitric
        oxide synthase-inhibiting combinations for therapeutic use)
IT
    Drug delivery systems
        (liposomes; nitric oxide-scavenging and nitric oxide
        synthase-inhibiting combinations for therapeutic use)
ΤТ
    Drug delivery systems
        (liqs., dispersions; nitric oxide-scavenging and nitric oxide
        synthase-inhibiting combinations for therapeutic use)
ΤТ
    Antibodies
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (monoclonal, OKT3; nitric oxide-scavenging and nitric oxide
        synthase-inhibiting combinations for therapeutic use)
    Anti-inflammatory agents
TΤ
      Anticoagulants
    Antidiabetic agents
    Antihypotensives
    Bacteria (Eubacteria)
    Drug delivery systems
    Drugs
    Immunosuppressants
      Pancreatic islet of Langerhans
    Scavengers
       Transplant rejection
        (nitric oxide-scavenging and nitric oxide synthase-inhibiting
        combinations for therapeutic use)
    Antibiotics
ΤТ
    Antibodies
    Corticosteroids, biological studies
    Interleukin 10
    Interleukin 13
    Interleukin 4
    Metalloporphyrins
    Porphyrins
    Prostaglandins
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (nitric oxide-scavenging and nitric oxide synthase-inhibiting
        combinations for therapeutic use)
ΙT
    Blood-coagulation factors
    Bradykinin receptors
    Cytokine receptors
    Cytokines
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (nitric oxide-scavenging and nitric oxide synthase-inhibiting
        combinations for therapeutic use)
ΙT
     Leukotriene antagonists
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (nitric oxide-scavenging and nitric oxide synthase-inhibiting
```

combinations for therapeutic use)

kwon - 09 / 890936 ΙT Peptides, biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (non-heme iron-contq.; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) TT Drug delivery systems (ophthalmic; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙΤ Drug delivery systems (oral; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Drug delivery systems (parenterals; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Drug delivery systems (rectal; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) TT Shock (circulatory collapse) (septic; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙΤ CD14 (antigen) Tumor necrosis factor receptors RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (sol.; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΤТ Drug delivery systems (solids; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) TT Drug delivery systems (solns.; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT Eye, disease (therapeutic agents for; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙΤ Globulins, biological studies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (thymoglobulin; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) Complement receptors ΤТ RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (type 1, sol.; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) Transition metal complexes TT RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(with dithiocarbamates; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

ΙT Transforming growth factors

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(.beta.-; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

Interferons

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(.gamma., antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) IT Interferon receptors RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (.gamma.-interferon, sol.; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙΤ 9001-30-3, Blood coagulation factor XII 80295-54-1, Complement C5a RL: BSU (Biological study, unclassified); BIOL (Biological study) (antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT 9025-82-5, Phosphodiesterase 9029-60-1, Lipoxygenase 39391-18-9, Cyclooxygenase 57576-52-0, Thromboxane A2 80295-70-1, C1 Esterase RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΤT 506-32-1 RL: BSU (Biological study, unclassified); BIOL (Biological study) (metabolites; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT 140608-64-6, Muromonab CD3 RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) 50-33-9, Phenylbutazone, biological ΙT 50-02-2 50-24-8, Prednisolone 50-44-2, 6-Mercaptopurine 50-78-2, Aspirin 53-86-1, studies Indomethacin 59-66-5, Acetazolamide 70-51-9, Desferrioxamine , Aminoquanidine 83-43-2, Methylprednisolone 89-57-6, Mesalamine 92-13-7, Pilocarpine 443-48-1, Metronidazole 446-86-6, Azathioprine 512-15-2, Cyclopentolate 594-07-0D, Dithiocarbamic acid, 599-79-1, Sulfasalazine 737-86-0, Pyridoxal dithiocarbamates isonicotinoyl hydrazone 867-44-7 1404-26-8, Polymyxin B 2418-14-6, 4428-95-9, Foscarnet 7439-89-6D, Iron, Dimercaptosuccinic acid dithiocarbamate complexes, biological studies 7439-96-5D, Manganese, dithiocarbamate complexes, biological studies 7440-48-4D, Cobalt, dithiocarbamate complexes, biological studies 7440-50-8D, Copper, dithiocarbamate complexes, biological studies 9004-10-8, Insulin, biological studies 12678-01-2, Phenanthroline 22664-55-7, Metipranolol 24280-93-1, Mycophenolic acid 24584-09-6, ICRF-187 26839-75-8, Timolol 30652-11-0, 1,2-Dimethyl-3-hydroxypyrid-4-one 47141-42-4, Levobunolol 53882-12-5, Lodoxamide 73384-59-5, Ceftriaxone 53774-63-3 79217-60-0, Cyclosporin 82410-32-0, Ganciclovir 94161-07-6, N-Methyl-D-glucamine dithiocarbamate 94161-07-6D, N-Methyl-D-glucamine dithiocarbamate, iron complexes 104987-11-3, FK506 106602-62-4, Amylin 160525-37-1 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) ΙT 58-82-2, Bradykinin 10102-43-9, Nitric oxide, biological studies 65154-06-5, Platelet-activating factor 125978-95-2, Nitric oxide synthase RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use) 69-72-7, biological studies ΤТ RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)

(salicylates; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

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ANSWER 30 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
AN
    1997:205254 HCAPLUS
DN
    126:198546
    Autologous immune cell therapy: cell compositions, methods and
ΤI
    applications to treatment of human disease
ΙN
    Gruenberg, Michael L.
PΑ
    Celltherapy, Inc., USA; Gruenberg, Michael L.
SO
    PCT Int. Appl., 98 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
TC
    ICM C12N005-08
     ICS A61K035-14
CC
    15-1 (Immunochemistry)
FAN.CNT 1
    PATENT NO.
                     KIND DATE
                                         APPLICATION NO. DATE
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                                         ______
                    A1 19970213
                                         WO 1996-US12170 19960725 <--
PΙ
    WO 9705239
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                         19970213
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PRAI US 1995-506668
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    US 1996-700565
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    WO 1996-US12170 W
                          19960725
                                    <---
AΒ
    Compns. contq. substantially homogeneous populations of functionally or
    phenotypically defined immune cells that have been isolated from a patient
    and expanded and/or differentiated ex vivo. The immune cells are effector
    or memory or regulatory T cells, Th1 cells, Th2 cells, Th3 cells, CD4+
    cells, CD8+ cells, etc. The cell population expansion is activated by sp.
    surface protein, interferon-.gamma., interleukin 2, interleukin 4,
    anti-.gamma. interferon, anti-interleukin 12, monoclonal
    antibody to CD3, CD2, CD4, CD8, CD11a, CD27, CD28, CD44, or
    CD45RO, and is performed in a hollow fiber bioreactor. Methods for
    treating or preventing disease or otherwise altering the immune status of
    the patient by reinfusing such cells into the donor are also provided.
    The autologous immune cell therapy is used for treating autoimmune
    disease, chronic inflammation, allergy, infection, organ or tissue
    transplant rejection, rheumatoid arthritis, inflammatory bowel
    disease, insulin-dependent diabetes mellitus, tumor, multiple
    sclerosis, Crohn's disease, HIV infection, etc.
ST
    autologous immune cell therapy autoimmune disease
IT
    CD antigens
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (CD27; autologous immune cell therapy for treatment of human diseases)
ΙΤ
     Intestine, disease
        (Crohn's; autologous immune cell therapy for treatment of human
        diseases)
ΙT
    Glycoproteins, specific or class
```

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RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (H-CAM (homing cell adhesion mol.); autologous immune cell therapy for
        treatment of human diseases)
ΙT
    Antigens
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (alloantigens; autologous immune cell therapy for treatment of human
        diseases)
TT
    Transplant and Transplantation
        (allotransplant, organ; autologous immune cell therapy for
        treatment of human diseases)
ΙT
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (antigens CD11a; autologous immune cell therapy for treatment of human
        diseases)
TΤ
    Allergy
    Animal tissue
    Autoimmune disease
    Body fluid
    CD4-positive T cell
    CD8-positive T cell
    Cell differentiation
    Human immunodeficiency virus
    Human immunodeficiency virus 1
    Immunosuppressants
    Infection
    Mononuclear cell (leukocyte)
    Neoplasm
    Pathogen
    Rheumatoid arthritis
       Transplant rejection
        (autologous immune cell therapy for treatment of human diseases)
ΙΤ
    Antibodies
    Antigens
    Interleukin 2
    Interleukin 4
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); BUU (Biological use, unclassified); BIOL (Biological
    study); USES (Uses)
        (autologous immune cell therapy for treatment of human diseases)
TΤ
    Integrins
    RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (autologous immune cell therapy for treatment of human diseases)
TT
    CD2 (antigen)
    CD28 (antigen)
    CD3 (antigen)
    CD4 (antigen)
    CD44 (antigen)
    CD45RO (antigen)
    CD8 (antigen)
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (autologous immune cell therapy for treatment of human diseases)
    Proteins, specific or class
TΤ
    RL: BAC (Biological activity or effector, except adverse); BPR (Biological
    process); BSU (Biological study, unclassified); BIOL (Biological study);
    PROC (Process)
        (cell surface; autologous immune cell therapy for treatment of human
        diseases)
TT
    Inflammation
        (chronic; autologous immune cell therapy for treatment of human
        diseases)
IT
    T cell (lymphocyte)
```

(cytotoxic; autologous immune cell therapy for treatment of human diseases) ΙT Lymphocyte (effector cell; autologous immune cell therapy for treatment of human diseases) ΙT Mvelin RL: BSU (Biological study, unclassified); BIOL (Biological study) (encephalitogenic epitope; autologous immune cell therapy for treatment of human diseases) ΙΤ T cell (lymphocyte) (helper cell, Th3; autologous immune cell therapy for treatment of human diseases) ΙT T cell (lymphocyte) (helper cell/inducer, TH1; autologous immune cell therapy for treatment of human diseases) ΙΤ T cell (lymphocyte) (helper cell/inducer, TH2; autologous immune cell therapy for treatment of human diseases) ΙT Fibers RL: DEV (Device component use); USES (Uses) (hollow bioreactor; autologous immune cell therapy for treatment of human diseases) ΙT Bioreactors (hollow-fiber membrane; autologous immune cell therapy for treatment of human diseases) ΙT Intestine, disease (inflammatory; autologous immune cell therapy for treatment of human diseases) ΙT Drug delivery systems (infusions; autologous immune cell therapy for treatment of human diseases) ΙT Diabetes mellitus (insulin-dependent; autologous immune cell therapy for treatment of human diseases) CD antigens ΙT CD antigens Integrins Integrins RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (integrin .beta.7; autologous immune cell therapy for treatment of human diseases) ΙT T cell (lymphocyte) (memory; autologous immune cell therapy for treatment of human diseases) ΙΤ Antibodies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (monoclonal; autologous immune cell therapy for treatment of human diseases) ΙΤ Transplant and Transplantation (pancreatic islet; autologous immune cell therapy for treatment of human diseases) ΙT RL: BSU (Biological study, unclassified); BIOL (Biological study) (prodn. profile; autologous immune cell therapy for treatment of human diseases) T cell (lymphocyte) IΤ (regulatory and effector; autologous immune cell therapy for treatment of human diseases) Immunological accessory cell ΙT

(regulatory; autologous immune cell therapy for treatment of human

diseases)

# IT Transplant and Transplantation

(tissue; autologous immune cell therapy for treatment of human diseases)

## IT Pancreatic islet of Langerhans

(transplant; autologous immune cell therapy for treatment of human diseases)

IT Intestine, disease

(ulcerative colitis; autologous immune cell therapy for treatment of human diseases)

# IT Transplant and Transplantation

(xenotransplant, organ; autologous immune cell therapy for treatment of human diseases)

### IT Integrins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(.alpha.4; autologous immune cell therapy for treatment of human
diseases)

IT Interferons

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(.gamma.; autologous immune cell therapy for treatment of human diseases)

- L65 ANSWER 31 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- AN 1997:27039 HCAPLUS
- DN 126:72334
- TI Method of stimulating proliferation and differentiation of human fetal pancreatic cells ex vivo
- IN Rubin, Jeffrey; Hayek, Alberto; Beattie, Gillian M.; Otonkoski, Timo P. J.
- PA United States Dept. of Health and Human Services, USA; Whittler Institute for Diabetes and Endocrinology
- SO U.S., 9 pp. CODEN: USXXAM
- DT Patent
- LA English
- IC ICM C12N005-00

ICS C12N005-02

NCL 435240200

CC 9-11 (Biochemical Methods)

Section cross-reference(s): 14, 63

FAN.CNT 3

	PATENT NO.				KIND		DATE			APPLICATION NO.			DATE						
ΡΙ	- 7	5587309 2189052 9529989					19961224 19951109			CA 1995-2189052				19940429 19950428 19950428					
	WO				A1		19951109									<			
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	EΡ									E	2 1	995-9							
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						1999			U	5 1	997-7	3223	0	1997	0414	<			
PRAI	US	1994-235394		A		19940429		<	-										
	WO	1995-US5521		W		19950428		<	_										

AB A method of inducing the proliferation and/or differentiation of human fetal pancreatic cells entails contacting such cells in primary culture with hepatocyte growth factor/scatter factor, thereby inducing a

ST

ΙT

ΙΤ

IT

ΙT

ΙT

ΙT

ΙT

ΙT

TT

ΙΤ

ΙT

ΤT

for transplantation in diabetes)

proliferation of .beta.-epithelial cells, an increase in the no. of .beta.-epithelial cells which form islet-like cell clusters, and an increase in insulin prodn. per cell. The method provides increased nos. of functional islet-like cell clusters for transplantation, for example, into Type 1 diabetic patients. method can be scaled up to provide clin. useful nos. of cells for transplantation. pancreatic islet cell culture transplantation diabetes; hepatocyte growth factor pancreas cell culture; fetus pancreas cell culture transplantation diabetes; beta cell pancreatic islet proliferation culture; insulin producing islet cell culture transplantation Antibodies RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (anti-TGF-.beta.; human fetal pancreatic cell culture for transplantation in diabetes) Embryo, animal (fetus; human fetal pancreatic cell culture for transplantation in diabetes) Bioreactors Cell differentiation Cell proliferation Pancreas Pancreatic islet of Langerhans Therapy Transplant and Transplantation (human fetal pancreatic cell culture for transplantation in diabetes) Hepatocyte growth factor RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (human fetal pancreatic cell culture for transplantation in diabetes) Drug delivery systems (infusions; human fetal pancreatic cell culture for transplantation in diabetes) Diabetes mellitus (insulin-dependent; human fetal pancreatic cell culture for transplantation in diabetes) Transplant and Transplantation (pancreas; human fetal pancreatic cell culture for transplantation in diabetes) Transplant and Transplantation (pancreatic islet; human fetal pancreatic cell culture for transplantation in diabetes) Animal tissue culture (primary; human fetal pancreatic cell culture for transplantation in diabetes) Pancreas Pancreatic islet of Langerhans (transplant; human fetal pancreatic cell culture for transplantation in diabetes) Transforming growth factors RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (.beta.-; human fetal pancreatic cell culture for transplantation in diabetes) Pancreatic islet of Langerhans (.beta.-cell; human fetal pancreatic cell culture

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ΙT
    67763-96-6, IGF-I 67763-97-7, IGF-II 106096-93-9
     , FGF-2 148348-15-6, FGF-7
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); BUU (Biological use, unclassified); BIOL (Biological
    study); USES (Uses)
        (human fetal pancreatic cell culture for transplantation in
       diabetes)
    9004-10-8, Insulin, biological studies
ΙT
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); MFM (Metabolic formation); BIOL (Biological study);
    FORM (Formation, nonpreparative)
        (human fetal pancreatic cell culture for transplantation in
       diabetes)
    ANSWER 32 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
    1996:380155 HCAPLUS
ΑN
    125:31943
DN
TΙ
    Binding agents to CD23
    Bonnefoy, Jean-Yves Marcel Paul
ΙN
PΑ
    Glaxo Group Limited, UK
    PCT Int. Appl., 50 pp.
SO
    CODEN: PIXXD2
DT
    Patent
    English
LA
TC
    ICM C07K016-28
    ICS A61K039-395
CC
    15-3 (Immunochemistry)
FAN.CNT 2
    PATENT NO.
                    KIND DATE
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                    A1 19960502
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A 19941025 <---

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                            19951020 <--
    WO 1995-EP4109
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AΒ
    Binding agents to CD23 useful in the treatment of inflammatory, autoimmune
     or allergic diseases. The binding agent is a humanized antibody
    or fragment. Demonstrated in examples were preventative treatment of mice
     against arthritis using monoclonal anti-CD23 antibody,
     CD23-liposomes bind to CD14+ mononuclear cells and .alpha. chain of
     CD11b/CD18 and CD11c/CD18 recombinant transfectants, anti-CD11b and
     anti-CD11c monoclonal antibodies decrease
    CD23-liposome binding to activated blood monocytes, increases of monocyte
    nitrate prodn., oxidative burst and cytokine prodn. by binding recombinant
    CD23 to CD11b and CD11c, etc.
ST
    humanized chimeric antibody fragment CD23 inflammation; allergy autoimmune
    disease CD23 antibody fragment
    Allergy
TΤ
    Arthritis
    Asthma
    Autoimmune disease
    Dermatitis
    Diabetes mellitus
    Eczema
    Inflammation
    Lupus erythematosus
    Multiple sclerosis
    Psoriasis
    Sjogren's syndrome
    Urticaria
        (humanized and/or chimeric antibody or fragment specific for CD23 for
        treating inflammatory, autoimmune or allergic diseases)
ΙT
    Antibodies
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (humanized and/or chimeric antibody or fragment specific for CD23 for
        treating inflammatory, autoimmune or allergic diseases)
TΤ
    Intestine, disease
        (Crohn's, humanized and/or chimeric antibody or fragment specific for
       CD23 for treating inflammatory, autoimmune or allergic diseases)
     Immunoglobulin receptors
IΤ
      Receptors
     RL: BPR (Biological process); BSU (Biological study, unclassified); THU
     (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
        (Fc.epsilon.RII (IgE
        fragment Fc receptor II),
       humanized and/or chimeric antibody or fragment specific for CD23 for
        treating inflammatory, autoimmune or allergic diseases)
ΙT
    Lung, disease
        (chronic obstructive, humanized and/or chimeric antibody or fragment
        specific for CD23 for treating inflammatory, autoimmune or allergic
       diseases)
ΙT
    Pancreatic islet of Langerhans
        (disease, insulitis, humanized and/or chimeric
       antibody or fragment specific for CD23 for treating inflammatory,
       autoimmune or allergic diseases)
ΙT
    Nose
        (disease, rhinitis, humanized and/or chimeric antibody or fragment
        specific for CD23 for treating inflammatory, autoimmune or allergic
       diseases)
ΙT
     Bronchi
        (diseases, bronchitis, humanized and/or chimeric antibody or fragment
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specific for CD23 for treating inflammatory, autoimmune or allergic

diseases)

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ΙT
    Kidney, disease
        (glomerulonephritis, humanized and/or chimeric antibody or fragment
        specific for CD23 for treating inflammatory, autoimmune or allergic
       diseases)
ΙT
    Transplant and Transplantation
        (graft-vs.-host reaction,
       humanized and/or chimeric antibody or fragment specific for CD23 for
       treating inflammatory, autoimmune or allergic diseases)
IT
    Intestine, disease
        (inflammatory, humanized and/or chimeric antibody or fragment specific
        for CD23 for treating inflammatory, autoimmune or allergic diseases)
ΤT
    Antibodies
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (monoclonal, humanized and/or chimeric antibody or
        fragment specific for CD23 for treating inflammatory, autoimmune or
        allergic diseases)
ΙT
    Kidney, disease
        (nephrotic syndrome, humanized and/or chimeric antibody or fragment
       specific for CD23 for treating inflammatory, autoimmune or allergic
       diseases)
ΙT
    Arthritis
        (rheumatoid, humanized and/or chimeric antibody or fragment specific
        for CD23 for treating inflammatory, autoimmune or allergic diseases)
IT
    Thyroid gland, disease
        (thyroiditis, Mashimotos; humanized and/or chimeric antibody or
        fragment specific for CD23 for treating inflammatory, autoimmune or
       allergic diseases)
ΙT
    Intestine, disease
        (ulcerative colitis, humanized and/or chimeric antibody or fragment
       specific for CD23 for treating inflammatory, autoimmune or allergic
       diseases)
    Eye, disease
ΙΤ
        (uveitis, humanized and/or chimeric antibody or fragment specific for
       CD23 for treating inflammatory, autoimmune or allergic diseases)
    ANSWER 33 OF 49 HCAPLUS COPYRIGHT 2002 ACS
    1996:380154 HCAPLUS
ΑN
    125:56235
DN
TΙ
    Binding agents for treatment of inflammatory, autoimmune or allergic
ΙN
    Bonnefoy, Jean-Yves Marcel Paul; Lecoanet-Henchoz, Sybille
    Glaxo Group Limited, UK
PΑ
    PCT Int. Appl., 51 pp.
SO
    CODEN: PIXXD2
DT
    Patent
    English
LA
IC
    ICM C07K016-28
    ICS C07K016-46; C07K014-05; C07K014-745; A61K039-395
CC
    15-3 (Immunochemistry)
FAN.CNT 2
                                         APPLICATION NO. DATE
    PATENT NO.
                     KIND DATE
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                     A1 19960502
                                         WO 1995-EP4110 19951020 <--
PΙ
    WO 9612742
        W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES,
            FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV,
            MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
            SK, TJ
        RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
            LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
            SN, TD, TG
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AU 9538679

A1 19960515

AU 1995-38679

19951020 <--

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В2
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                            19980721
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     EP 1018517
                       Α2
                            20000712
                                           EP 1999-204301
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     EP 1018517
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                            20010416
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     ES 2154741
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                            20011113
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     ZA 9508947
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     IL 115733
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     JP 1996-513508
                       А3
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     WO 1995-EP4110
                       W
                            19951020
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AB
     Binding agents to CD11b, CD11c, CD21, CD23, a 70 to 85 KDa protein
     expressed on endothelial cells or a 115 KDa protein expressed on
     endothelial cells, can be useful in the treatment of inflammatory,
     autoimmune or allergic disease. The binding agent is a humanized
     antibody or fragment. Demonstrated in examples were
     CD23-liposomes bind to CD14+ mononuclear cells and .alpha. chain of
     CD11b/CD18 and CD11c/CD18 recombinant transfectants, anti-CD11b and
     anti-CD11c monoclonal antibodies decrease
     CD23-liposome binding to activated blood monocytes, increases of monocyte
     nitrate prodn., oxidative burst and cytokine prodn. by binding recombinant
     CD23 to CD11b and CD11c, competition of CD23-liposomes with Epstein-Barr
     virus, interferon .alpha., C3 peptide and C3d,g, etc.
     humanized chimeric antibody fragment CD11b CD11c; CD23 CD21 antibody
ST
     inflammation autoimmune disease; allergy antibody fragment CD11b CD11c
     CD21
     Proteins
TT
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
     (Biological study); PROC (Process)
        (70,000~85,000 mol. wt.; humanized or chimeric antibody and fragments
        as binding agent to CD11b, CD21, CD11c, for treating inflammatory,
        autoimmune or allergic diseases)
     Human herpesvirus 4
IT
     RL: BIOL (Biological study); USES (Uses)
        (factor X; humanized or chimeric antibody and fragments as binding
        agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or
        allergic diseases)
ΙT
     Glycoproteins
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (gp350/220; Epstein-Barr virus; humanized or chimeric antibody and
        fragments as binding agent to CD11b, CD21, CD11c, for treating
        inflammatory, autoimmune or allergic diseases)
IT
     Allergy
     Arthritis
     Asthma
     Autoimmune disease
     Dermatitis
     Diabetes mellitus
     Eczema
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Inflammation

Lupus erythematosus Multiple sclerosis Psoriasis

Rheumatoid arthritis

Sjogren's syndrome

Urticaria

(humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Antibodies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Proteins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(115,000-mol.-wt., humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Intestine, disease

(Crohn's, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Immunoglobulin receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(IgE type II, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Integrins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(antigens CD11b, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Integrins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(antigens CD11c, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Bronchi

(bronchitis, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Lung, disease

(chronic obstructive, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Kidney, disease

(glomerulonephritis, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Transplant and Transplantation

(graft-vs.-host reaction,

humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Intestine, disease

(inflammatory, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Pancreatic islet of Langerhans

(insulitis, humanized or chimeric antibody and fragments as

binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Kidney, disease

(nephrotic syndrome, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Nose

(rhinitis, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Thyroid gland, disease

(thyroiditis, Mashimotos; humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Complement receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(type 2, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Intestine, disease

(ulcerative colitis, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Eye, disease

(uveitis, humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT Interferons

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(.alpha., humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT 9001-29-0, Blood-coagulation factor X

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Epstein-Barr virus; humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT 80295-41-6, Complement C3 82903-93-3, Complement C3dg

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

IT 177994-56-8

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (humanized or chimeric antibody and fragments as binding agent to CD11b, CD21, CD11c, for treating inflammatory, autoimmune or allergic diseases)

- L65 ANSWER 34 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- AN 1996:305579 HCAPLUS
- DN 125:8340
- TI Role of adhesion molecules in islet allo- and xenograft rejection
- AU Gotoh, M.; Ohzato, H.; Fukuzaki, T.; Ohta, Y.; Nishihara, M.; Hasuike, M.; Umeshita, K.; Sakon, M.; Yagita, H.; et al.
- CS Medical School, Osaka University, Suita, 565, Japan
- SO Transplantation Proceedings (1996), 28(2), 617 CODEN: TRPPA8; ISSN: 0041-1345
- PB Appleton & Lange
- DT Journal

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LA
    English
CC
    15-10 (Immunochemistry)
ΑB
    The authors examd. the roles of LFA-1 and ICAM-1 mols. in islet allo- and
    xenograft rejection using species-specific monoclonal
    antibodies.
ST
    adhesion mol islet graft rejection
    Glycoproteins, specific or class
ΙT
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (ICAM-1 (intercellular adhesion mol. 1), adhesion mols. role in
       pancreatic islet allo- and xenograft rejection)
IT
    Transplant and Transplantation
        (allo-, adhesion mols. role in pancreatic
        islet allo- and xenograft rejection)
ΙT
    Pancreatic islet of Langerhans
        (allotransplant, adhesion mols. role in pancreatic
        islet allo- and xenograft rejection)
IT
    Integrins
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (antigens LFA-1, adhesion mols. role in pancreatic islet allo- and
       xenograft rejection)
    Transplant and Transplantation
ΤТ
        (xeno-, adhesion mols. role in pancreatic
       islet allo- and xenograft rejection)
IT
    Pancreatic islet of Langerhans
        (xenotransplant, adhesion mols. role in pancreatic
        islet allo- and xenograft rejection)
L65
    ANSWER 35 OF 49 HCAPLUS COPYRIGHT 2002 ACS
ΑN
    1996:142192 HCAPLUS
    124:173443
DN
    Methods for inhibiting antigen specific T cell responses
ΤI
    Blazar, Bruce R.; Vallera, Daniel A.
ΙN
    Regents of the University of Minnesota, USA
PΑ
SO
    PCT Int. Appl., 61 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
    ICM A61K039-00
IC
    ICS C07K014-705; C07K014-725; C07K016-28; C07K019-00
CC
    15-3 (Immunochemistry)
FAN.CNT 1
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PΙ
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                                          EP 1995-922279
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    EP 784482
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    JP 10501815
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                          19980217
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                                                          19990908 <--
    AU 9947458
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PRAI US 1994-255267
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    AU 1995-27018
                     А3
                     W
                           19950607
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    WO 1995-US7351
    Methods for inhibiting antigen-specific T cell responses by use of an
AB
    agent which inhibits a costimulatory signal in T cells are disclosed.
     Preferably, both a first agent which inhibits a costimulatory signal in
     the T cell and a second agent which inhibits adhesion of the T cell to a
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cell presenting antigen to the T cell, are used to inhibit

ST

TΤ

TT

ΙΤ

ΙT

ΤТ

ΤТ

IΤ

IT

antigen-specific T cell responses. For example, anti-LFA-1 antibody, that inhibits adhesion of a T cell to a cell presenting antigen, can be used in conjunction with a CTLA4-Ig fusion protein which inhibits a costimulatory signal in the T cell. Alternatively, another agent which inhibits a costimulatory signal in T cells, such as an anti-B7-1 antibody or an anti-B7-2 antibody can be used with a second agent which inhibits a proliferative signal in the T cell e.g., an anti-IL-2 receptor antibody. The methods of the invention are particularly useful for inhibiting graft vs. host disease and for inhibiting rejection of a transplanted tissue or organ. T cell signal adhesion receptor inhibitor; monoclonal antibody adhesion mol lymphokine receptor; graft versus host disease organ transplant Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD48; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD49; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD61P; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Animal growth regulators RL: BSU (Biological study, unclassified); BIOL (Biological study) (T cell growth factor; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Bone marrow (cell; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Immunoglobulins RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (fusion protein; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Hematopoietic precursor cell (monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Antigens RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting

graft vs. host disease in tissue or organ transplant

recipients) ΙT Receptors RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antibodies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙΤ Blood corpuscle (peripheral; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Animal tissue (transplant; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (B 7.2, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙΤ Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (B7/BB-1, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Glycoproteins, specific or class ΙΤ RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CAM, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Antigens IΤ RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD2, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD28, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD44, monoclonal antibodies to adhesion mol. or T

cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD56, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) TT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CD59, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (CDw52, CD52; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (CTLA-4 (cytotoxic T-lymphocyte-activating, 4), sol. form or fusion protein contg.; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Glycophosphoproteins RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (E-selectins, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Antigens RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (HML-1, CD103; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Glycoproteins, specific or class RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (ICAM-1 (intercellular adhesion mol. 1), monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Glycoproteins, specific or class RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (ICAM-2 (intercellular adhesion mol. 2), monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙΤ Glycoproteins, specific or class RL: ADV (Adverse effect, including toxicity); BSU (Biological study,

unclassified); BIOL (Biological study)

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(ICAM-3 (intercellular adhesion mol. 3), monoclonal
        antibodies to adhesion mol. or T cell growth factor receptor or
        T cell signal costimulator for inhibiting graft vs. host
        disease in tissue or organ transplant recipients)
    Glycoproteins, specific or class
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (L-selectins, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙT
    Lymphocyte
        (T-cell, monoclonal antibodies to adhesion mol. or
        T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙT
    Antigens
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (Thy-1, monoclonal antibodies to adhesion mol. or T
        cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙT
    Sialoglycoproteins
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (VCAM-1 (vascular cell adhesion mol. 1), monoclonal
        antibodies to adhesion mol. or T cell growth factor receptor or
        T cell signal costimulator for inhibiting graft vs. host
        disease in tissue or organ transplant recipients)
ΙT
    Antigens
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (allo-, monoclonal antibodies to adhesion mol. or T
        cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙΤ
    Integrins
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (antigens LFA-1, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΤТ
    Adhesion
        (bio-, inhibitor; monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
TΤ
    Intestine
        (colon, transplant; monoclonal antibodies
        to adhesion mol. or T cell growth factor receptor or T cell signal
        costimulator for inhibiting graft vs. host disease in tissue
        or organ transplant recipients)
     Proteins, specific or class
TΨ
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (fusion products, CTLA4-Ig; monoclonal antibodies
        to adhesion mol. or T cell growth factor receptor or T cell signal
        costimulator for inhibiting graft vs. host disease in tissue
        or organ transplant recipients)
    Glycoproteins, specific or class
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (gp39, monoclonal antibodies to adhesion mol. or T
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cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Transplant and Transplantation (graft-vs.-host reaction, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Lymphokines and Cytokines ΙT RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 10, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Lymphokines and Cytokines RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 12, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Lymphokines and Cytokines RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 15, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Lymphokines and Cytokines TΨ RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 1.alpha., monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙΤ Lymphokines and Cytokines RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 1.beta., monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΤТ Lymphokine and cytokine receptors Lymphokines and Cytokines Receptors RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 2, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Lymphokines and Cytokines ΙΤ RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 4, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Lymphokines and Cytokines RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 6, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Lymphokines and Cytokines RL: BSU (Biological study, unclassified); BIOL (Biological study) (interleukin 7, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for

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inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙT
    Lymphokines and Cytokines
    RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (interleukin 9, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
    Sialoglycoproteins
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (leukosialins, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙT
    Antibodies
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (monoclonal, monoclonal antibodies to
        adhesion mol. or T cell growth factor receptor or T cell signal
        costimulator for inhibiting graft vs. host disease in tissue
        or organ transplant recipients)
ΙT
    Spleen
        (splenocyte, monoclonal antibodies to adhesion mol.
        or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙT
    Bone marrow
    Heart
    Intestine
    Kidney
    Liver
    Luna
       Organ
       Pancreatic islet of Langerhans
        (transplant, growth factor receptor or T
        cell signal costimulator for inhibiting graft vs.
       host disease in tissue or
       organ transplant recipientsHearty)
       gROLES ASSIGNBiIntestineSESROLES
       KidneyASROLES ASSIGNCTLiverstuROLES ASSIalROLES
       ASSIGNED INTOrganLROLEPancreatic isle)
IT
       ***Integrins
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (.alpha.1.beta.1, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΤТ
    Integrins
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
    unclassified); BIOL (Biological study)
        (.alpha.2.beta.1, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
ΙΤ
    Integrins
    RL: ADV (Adverse effect, including toxicity); BSU (Biological study,
     unclassified); BIOL (Biological study)
        (.alpha.3.beta.1, monoclonal antibodies to adhesion
        mol. or T cell growth factor receptor or T cell signal costimulator for
        inhibiting graft vs. host disease in tissue or organ
        transplant recipients)
```

#### Integrins ΤТ RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.4.beta.1, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙΤ Integrins RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.5.beta.1, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) IT Integrins RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.6.beta.1, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) IΤ Integrins RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (.beta.1, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΤТ Integrins RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (.beta.3, monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) Integrins ΙT RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study) (.beta.4, CD104; monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) ΙT Interferons RL: BSU (Biological study, unclassified); BIOL (Biological study) (.gamma., monoclonal antibodies to adhesion mol. or T cell growth factor receptor or T cell signal costimulator for inhibiting graft vs. host disease in tissue or organ transplant recipients) L65 ANSWER 36 OF 49 HCAPLUS COPYRIGHT 2002 ACS 1995:873806 HCAPLUS ΑN DN 123:282535 Normalization of pancreatic exocrine enzymes by islet ТΙ transplantation in diabetic rats ΑU Lee, P. C.; Jordan, M.; Pieper, G. M.; Roza, A. M. Dep. Gastroenterology, Pediatric, Pharmacology Toxicology, Med. Coll. CS Wisconsin, Milwaukee, WI, 53226, USA Biochemistry and Cell Biology (1995), 73(5 & 6), 269-73 SO CODEN: BCBIEQ; ISSN: 0829-8211 PΒ National Research Council of Canada DT Journal LA English

14-8 (Mammalian Pathological Biochemistry)

CC

In an effort to evaluate the effectiveness of islet AB transplantation in correcting exocrine dysfunction, young male Lewis rats were made diabetic b i.v. streptozotocin injection. Diabetes status was confirmed by decrease in insulin and increase in blood glucose and glycosylated Hb levels. Pancreatic islets were isolated from age-matched control syngeneic rats by collagenase digestion followed by purifn. through a Ficoll gradient. Islets (-1200) were grafted to the liver by intraportal injection to animals at 8 wk after diabetes was established. Transplanted rats were sacrificed 4 wk after correction of hyperglycemia. Diabetes resulted in decrease in body wt. Transplantation reversed the body wt. loss and led to a body wt. gain. Diabetes resulted in a decrease in pancreatic amylase (1.4 .+-. 0.4 U/mg protein compared with a control value 121.9 .+-. 3.2 U/mg protein) and a slight increase in lipase (87.3 .+-. 5.5 U/mg protein compared with a control value of 69 .+-. 4.7 U/mg protein). Transplantation completely normalized amylase (132.2 .+-. 25.0 U/mg protein) and lipase (56.3 .+-. 3.9 U/mg protein) in spite of an imperfect correction of blood insulin, glucose, and glycosylated Hb levels in these rats. These data demonstrated that islet transplantation is very effective in correcting the exocrine enzyme changes resulting from diabetes. Evaluation of steady-state levels of amylase mRNA in these groups of animals by Northern blots showed a decrease in the amylase mRNA level in diabetes and a return to that of control in transplanted rats, indicating that the control of amylase expression is most likely at the pretranslational level. ST lipase amylase islet transplantation diabetes mellitus ΙT Diabetes mellitus Liver Transcription, genetic Transplant and Transplantation (amylase, lipase and mRNA normalization by islet transplantation to liver in diabetic rat) Ribonucleic acids, messenger RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (amylase, lipase and mRNA normalization by islet transplantation to liver in diabetic rat) ΙT Pancreatic islet of Langerhans (transplant, amylase, lipase and mRNA normalization by islet transplantation to liver in diabetic rat) TT 9000-92-4, Amylase **9001-62-1**, Lipase RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence) (amylase, lipase and mRNA normalization by islet transplantation to liver in diabetic rat) ANSWER 37 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65 1995:770139 HCAPLUS ΑN DN 123:254010 Prolongation of rat islet allograft survival by treatment with TΙ monoclonal antibodies against VLA-4 and LFA-1 Yang, Hua; Issekutz, Thomas B.; Wright, James R. Jr. ΑU Departments of Pathology, Izaak Walton Killam Children's Hospital, CS Halifax, NS, B3J 3G9, Can. SO Transplantation (1995), 60(1), 71-6CODEN: TRPLAU; ISSN: 0041-1337 PΒ Williams & Wilkins DT Journal LA English 15-3 (Immunochemistry) CC In this study, we investigated the effects of treatment with AΒ monoclonal antibodies against the VLA-4 and LFA-1

adhesion mols. on rat islet allograft rejection. TA-2 and TA-3

kwon - 09 / 890936 are function-blocking mAb against rat VLA-4 and LFA-1, resp. Lewis rats were made diabetic (plasma glucose levels > 22.2 mmol/L) with streptozotocin. One week later, 1500 freshly isolated Wistar Furth rat islets were transplanted under the left kidney capsule of each rat. Monoclonal antibodies were administered i.v. at a dosage of 2 mg on the day of islet transplantation and then i.p. every second day for 3 wk or until graft rejection. Plasma glucose levels were monitored at least 3 times a week and blood leukocyte counts were monitored every 4 days. Rejection was defined as 2 plasma qlucose levels > 11.1 mmol/L. Mean graft survival times in untreated and control mAb-treated rats were 5.3 and 6.0 days, resp. Treatment with anti-VLA-4 or anti-LFA-1 resulted in only modest prolongation of mean graft survival time (9.3 and 7.4 days, resp.). However, treatment with the combination of anti-VLA-4 plus anti-LFA-1 resulted in long-term (i.e., 60-day) graft survival in 5 of 7 rats. Graft nephrectomy and histol. confirmed islet graft survival at 60 days. A second Wistar Furth rat islet graft under the opposite renal capsule after graft nephrectomy did not show full tolerance; however, the function of the second graft was significantly prolonged without any immunosuppression. Combined blockade of VLA-4 and LFA-1 also markedly prolonged islet graft survival when islets were transplanted via the portal vein. In conclusion, both VLA-4 and LFA-1 play a role in islet allograft rejection and blockade of both prevents or greatly delays graft rejection. VLA4 LFA1 pancreatic islet allograft rejection; monoclonal antibody VLA4 LFA1 pancreas allograft Pancreatic islet of Langerhans (allotransplant, treatment with monoclonal antibodies against VLA-4 and LFA-1 prolongs rat pancreatic islet allograft survival) Integrins RL: BSU (Biological study, unclassified); BIOL (Biological study) (antigens LFA-1, treatment with monoclonal antibodies against VLA-4 and LFA-1 prolongs rat pancreatic islet allograft

ΙT

ΙΤ

TT

survival) Antibodies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (monoclonal, treatment with monoclonal antibodies against VLA-4 and LFA-1 prolongs rat pancreatic islet allograft survival)

ΙT Integrins

RL: BSU (Biological study, unclassified); BIOL (Biological study) (.alpha.4.beta.1, treatment with monoclonal antibodies against VLA-4 and LFA-1 prolongs rat pancreatic islet allograft survival)

- ANSWER 38 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- ΑN 1995:627461 HCAPLUS
- DN 123:110034
- Immunomodulation of pancreatic islet allografts in mice with ΤI CTLA4Iq secreting muscle cells
- Chahine, A. Alfred; Yu, Ming; McKernan, Melissa M.; Stoeckert, Christian; ΑU Lau, Henry T.
- CS Children's Hospital of Philadelphia, University of Pennsylvania, Philadelphia, 19104, USA
- SO Transplantation (1995), 59(9), 1313-18 CODEN: TRPLAU; ISSN: 0041-1337
- DT Journal
- LA English
- CC 15-10 (Immunochemistry)
- In an effort to create a model of in vivo prodn. of immunosuppressants, AΒ

the authors have transfected C2C12 muscle cells (H-2k) with the cDNA for CTLA4Ig, a fusion protein that prevents the activation of T cells by blocking the costimulatory signal transduced by the T cell receptors CD28 and CTLA4. CTLA4Iq-secreting clones were cotransplanted with islets as composite grafts in the renal subcapsular space of diabetic mice. When the myoblasts were syngeneic to C3H/HeJ hosts (H-2k), there was a significant prolongation of survival of allogeneic C57BL/6J(H-2b) islets from a mean 11.0 days to 31.7 days. When the graft was completely allogeneic (H-2k myoblasts and islets into H-2b recipients), there was no benefit in survival. A transient blockade of LFA-1 with the mAb M17 was synergistic in this combination: 8 out of 12 C57BL/6J recipients achieved long-term acceptance. CTLA4Iq levels were detected up to 60 days after transplantation In conclusion, the authors have shown that C2C12 muscle cells can be genetically engineered to secrete functional CTLA4Ig and that they can be used as a gene reservoir for the continuous in vivo prodn. of CTLA4Ig to modulate the survival of islet cell allografts. pancreas islet allograft CTLA4Ig protein muscle Immunosuppressants (pancreatic islet allograft rejection is suppressed by cotransplant of syngeneic CTLA4Ig-secreting muscle cells) Diabetes mellitus (suppression of pancreatic islet allograft rejection by cotransplant of syngeneic CTLA4Ig-secreting muscle cells) Antigens RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (CTLA-4 (cytotoxic T-lymphocyte-activating, 4), fusion products, with IqG2a .qamma. chain; suppression of pancreatic islet allograft rejection by cotransplant of syngeneic CTLA4Ig-secreting muscle cells) Immunoglobulins RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (G2a, fusion products, with CTLA4 proteins; suppression of pancreatic islet allograft rejection by cotransplant of syngeneic CTLA4Ig-secreting muscle cells) Transplant and Transplantation (allo-, pancreatic islet; suppression of rejection by cotransplant of syngeneic CTLA4Ig-secreting muscle cells) Pancreatic islet of Langerhans (allotransplant, suppression of rejection by cotransplant of syngeneic CTLA4Ig-secreting muscle cells) Integrins RL: BSU (Biological study, unclassified); BIOL (Biological study) (antigens LFA-1, pancreatic islet allograft rejection is suppressed by cotransplant of CTLA4Iq-secreting muscle cells and administration of monoclonal antibody to) Antibodies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (monoclonal, anti-LFA-1; pancreatic islet allograft rejection is suppressed by cotransplant of CTLA4Ig-secreting muscle cells and administration of) Muscle (transplant, suppression of pancreatic islet allograft rejection by cotransplant of syngeneic CTLA4Iq-secreting muscle cells) ANSWER 39 OF 49 HCAPLUS COPYRIGHT 2002 ACS

DN 123:109727
TI Anti-ICAM-1/LFA-1 monoclonal antibody therapy prevents graft rejection and IDDM recurrence in BB rat pancreas transplantation

ST

ΤТ

ΙΤ

ΙT

ΙΤ

IT

ΙT

ΙT

TΤ

ΤТ

L65

ΑN

1995:625530 HCAPLUS

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ΑU
     Uchikoshi, F.; Ito, T.; Kamiike, W.; Moriguchi, A.; Nozaki, S.; Ito, A.;
     Kuhara, A.; Miyata, M.; Matsuda, H.; et al.
CS
     Medical School, Osaka University, Osaka, 565, Japan
     Transplantation Proceedings (1995), 27(2), 1527-8
SO
     CODEN: TRPPA8; ISSN: 0041-1345
DТ
     Journal
     English
LA
CC
     15-3 (Immunochemistry)
     Insulin-dependent diabetes mellitus (IDDM) is generally
AΒ
     considered to be induced by an autoimmune mechanism. From this point of
     view, pancreatic grafts in IDDM patients can be destroyed by the
     autoimmune mechanism as well as by an allograft rejection.
     Previously the recurrence was reported of IDDM in segmental pancreatic
     grafts from the identical twin or haplotype-identical sibling. To
     achieve long-term survival of pancreatic grafts, it is important
     to prevent IDDM recurrence in the graft as well as to control
     graft rejection. Spontaneously diabetic Biobreeding (BB) rats are
     well known as an animal model of human IDDM, and the etiol. of IDDM in
     these animals is reported to be very similar to that of human IDDM.
     Pancreas transplantation in BB rats may be a useful model for
     investigating the mechanisms of graft rejection and recurrence
     of IDDM. In this study, the authors examd. the efficacy of
     monoclonal antibodies against adhesion mols., such as
     ICAM-1 and LFA-1, in controlling graft rejection and preventing
     the recurrence of IDDM.
     ICAM1 antibody pancreas transplant diabetes therapy; LFA1
ST
     integrin antibody pancreas diabetes therapy
ΙT
        (Biobreeding; monoclonal antibodies to ICAM-1/LFA-1
        prevent pancreatic islet allograft rejection and recurrence
        of diabetes in)
     Glycoproteins, specific or class
TΤ
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (ICAM-1 (intercellular adhesion mol. 1), monoclonal
        antibodies to ICAM-1/LFA-1 prevent pancreatic islet
        allograft rejection and recurrence of diabetes in Biobreeding
        rat)
ΙT
     Transplant and Transplantation
        (allo-, pancreatic islet;
        monoclonal antibodies to ICAM-1/LFA-1 prevent
        graft rejection and recurrence of diabetes in Biobreeding rat)
ΙT
     Pancreatic islet of Langerhans
        (allotransplant, monoclonal antibodies to
        ICAM-1/LFA-1 prevent graft rejection and recurrence of
        diabetes in Biobreeding rat)
ΤТ
     Integrins
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (antigens LFA-1, monoclonal antibodies to
        ICAM-1/LFA-1 prevent pancreatic islet allograft rejection and
        recurrence of diabetes in Biobreeding rat)
ΙT
     Diabetes mellitus
        (insulin-dependent, monoclonal antibodies
        to ICAM-1/LFA-1 prevent pancreatic islet allograft rejection
        and recurrence of diabetes in Biobreeding rat)
TΤ
     Antibodies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (monoclonal, anti-ICAM-1/LFA-1; prevention of pancreatic
        islet allograft rejection and recurrence of diabetes in
        Biobreeding rat by)
L65 ANSWER 40 OF 49 HCAPLUS COPYRIGHT 2002 ACS
     1994:708187 HCAPLUS
ΑN
     121:308187
```

DN

- TI In vitro and in vivo evaluation of protamine-heparin membrane for microencapsulation of rat langerhans islets
- AU Tatarkiewicz, Krystyna; Sitarek, Elzbieta; Fiedor, Piotr; Sabat, Marek; Orlowski, Tadeusz
- CS Institute Biocybernetics and Biomedical Engineering, Polish Academy Sciences, Warsaw, 02-109, Pol.
- SO Artificial Organs (1994), 18(10), 736-9 CODEN: ARORD7; ISSN: 0160-564X
- DT Journal
- LA English
- CC 63-6 (Pharmaceuticals)
   Section cross-reference(s): 1
- AB Rat pancreatic islets were microencapsulated with multilayer protamine-heparin (PH) membrane. Basal and stimulatory insulin secretion of microencapsulated islets was similar to the controlled free islets in vitro. During the long-term culture (up to 2 wk) mean insulin release of encapsulated islets did not significantly differ from the mean of free ones (the ratio of mentioned means was 54-167%). Empty PH microcapsules transplanted into Wistar rats i.p. and under the kidney capsule were generally harmless up to 4 mo. In only a few cases traces of fibrotic tissue around capsules entrapped in the omentum were found. No damage of microcapsules structure was obsd. The worst results were obtained in the instance of retroperitoneal transplantation

. We conclude, therefore, that PH membrane was proved to be highly biocompatible, nontoxic for **islets**, and did not impair viability and glucose-dependent **insulin** secretion of **Langerhans islets** in in vitro culture.

- ST protamine heparin membrane microcapsule langerhans islet
- IT Pancreatic islet of Langerhans

(in vitro and in vivo evaluation of protamine-heparin membrane for microencapsulation of rat langerhans islets)

- IT Protamines
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (in vitro and in vivo evaluation of protamine-heparin membrane for microencapsulation of rat langerhans islets)
- IT Protamines
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (sulfates, in vitro and in vivo evaluation of protamine-heparin membrane for microencapsulation of rat langerhans islets)
- IT 9002-98-6 9005-38-3, Sodium alginate 9005-49-6,
   Heparin, biological studies 10043-52-4, Calcium chloride,
   biological studies 26913-06-4, Poly[imino(1,2-ethanediyl)]
   RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
   (in vitro and in vivo evaluation of protamine-heparin
   membrane for microencapsulation of rat langerhans
   islets)
- L65 ANSWER 41 OF 49 HCAPLUS COPYRIGHT 2002 ACS
- AN 1994:678806 HCAPLUS
- DN 121:278806
- TI Inhibition of **transplant** rejection by pretreatment of xenogeneic pancreatic islet cells with anti-ICAM-1 antibodies
- AU Zeng, Yijun; Gage, Andrew; Montag, Anthony; Rothlein, Robert; Thistlethwaite, J. Richard; Bluestone, Jeffrey A.

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Ben May Institute, University Chicago, Chicago, IL, USA
CS
SO
     Transplantation (1994), 58(6), 681-9
     CODEN: TRPLAU; ISSN: 0041-1337
DT
     Journal
LA
     English
     15-10 (Immunochemistry)
CC
     Cognate recognition of antigen-presenting cells by antigen-specific T
AB
     cells is critically dependent on non-cognate adhesive interactions. For
     instance, several studies have shown that in vivo anti-LFA-1 plus
     anti-ICAM-1 mAb treatment results in prolongation of
     allograft survival. The authors have developed a xenogeneic islet
     transplant model to investigate the role of various adhesion
     interactions in the xenogeneic response and study the effect of
     pretreating donor tissue with immunosuppressive drugs. Pancreatic islet
     cells were pretreated in vitro with anti-human ICAM-1 mAb,
     transplanted under the renal capsule of diabetic B6 mice in the
     absence of systemic immunosuppression and examd. for long-term
     xenograft acceptance. The survival of human islets pretreated
     with anti-human ICAM-1 was significantly prolonged (MST = 53 days, with
     40% of grafts surviving >100 days). In contrast, the survival
     of human islets pretreated with the control antibody was similar to those
     of non-treated islets (MST = 7 days). A massive lymphocyte infiltrate
     into control xenografts was obsd. at 5 days post-
     transplant. In contrast, a lymphocyte infiltrate did not appear
     in the anti-ICAM-1-treated islets for at least 11 days. Only mAbs
     specific for the LFA-1 binding epitope of ICAM-1 were found to inhibit a
     mixed islet/lymphocyte reaction in vitro and block graft
     rejection in vivo. However, graft prolongation is not
     accompanied by systemic tolerance. Mice transplanted
     simultaneously with human islet cells treated with control Iq (left
     kidney) or anti-ICAM-1 (right kidney) rejected the control islets but not
     anti-ICAM-1-treated islets. These results suggest that the LFA-1/ICAM-1
     interaction is a crit. component for xenograft rejection and,
     more important, that pretreatment of islet tissue with anti-adhesion mol.
     antibodies can profoundly alter graft recognition and rejection
     in the absence of any systemic drug therapy. However, graft
     prolongation is not accompanied by systemic tolerance induction.
ST
     ICAM 1 glycoprotein pancreatic islet xenotransplant; antibody
     ICAM pancreatic islet xenotransplant
ΙT
     Lymphocyte
        (ICAM-1/LFA-1 system in cellular infiltration in human pancreatic islet
        xenograft rejection)
ΙT
     Glycoproteins, specific or class
     RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
        (ICAM-1 (intercellular adhesion mol. 1), in rejection of human
        pancreatic islet xenograft)
ΙΤ
     Integrins
     RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
        (antigens LFA-1, in rejection of human pancreatic islet
        xenograft)
ΤТ
     Antibodies
     RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (monoclonal, RR1; human pancreatic islet xenograft
        survival prolongation by anti-ICAM-1)
ΙT
     Transplant and Transplantation
        (xeno-, pancreatic islet; ICAM-1/LFA-1
        system in rejection of human)
ΙT
     Pancreatic islet of Langerhans
        (xenotransplant, ICAM-1/LFA-1 system in rejection of human)
     ANSWER 42 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
     1994:628323 HCAPLUS
     121:228323
DN
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- kwon 09 / 890936 Characterization of a monoclonal antibody recognizing TΙ an epitope designated as canine leukocyte-associated antigen Yang, Wen-Chic; Esquenazi, Violet; Carreno, Manuel; Vallone, Teresa; ΑIJ Fuller, Laphalle; Roth, David; Nery, Jose; Burke, George; Miller, Joshua Department Surgery, University Miami School Medicine, Miami, FL, 33101, CS USA Transplantation (1994), 58(2), 233-40 SO CODEN: TRPLAU; ISSN: 0041-1337 DT Journal LA English CC15-3 (Immunochemistry) An IgG1 monoclonal antibody (mAb), AB designated as 15F1.5, was generated against surface determinants of a dog peripheral blood-derived PHA-induced IL-2-dependent T cell line. It reacted with 65-80% of peripheral blood mononuclear cells (PBMCs), 90-95% of polymorphonuclear cells (PMNs), 65-70% of thymocytes, 85-95% of Thy-1 pos. cells and 85-95% of IL-2-dependent T lymphoid cells in flow cytometry. It was nonreactive with peripheral blood red cells and platelets. It immunopptd. 95 and 150 Kd proteins derived from detergent solubilized lymphocyte membranes. Indirect immunofluorescent and immunoperoxidase staining of frozen tissue sections demonstrated pos. reactivity to cells in lymphoid but not nonlymphoid tissues. The 15F1.5 antibody was not directly mitogenic for PBMC's. It caused significant decrease in the lymphoproliferative response to T-dependent B cell mitogens, such as pokeweed mitogen (PWM) and staphage lysate (SPL), without significant effects on responses to the T cell mitogens, phytohemagglutinin (PHA), and Con A. The mixed lymphocyte culture (MLC) response and both the proliferative and effector arms of the cellmediated cytotoxicity reactions (CMC) were inhibited in a dose-dependent manner. The mAb also inhibited the auto- and allolymphoproliferative reactivity of mixed lymphocyte kidney or islet cell cultures (MLKC and MLIC), and the adhesion of T lymphoblasts and PMA-treated PMNs to endothelial cells. In vivo administration of the 15F1.5 (20 mg/day for 5 days) caused an immediate and prolonged redn. in MLC responses, assocd. with cell binding of the mAb to PBMC and epitope modulation during the course of treatment, as indicated by flow cytometry. results suggest that 15F1.5 is an immunomodulating antibody
- transplants.

  ST dog LFA 1 antigen characterization; monoclonal antibody
  LFA 1 antigen dog

reacting with canine LFA-1. Thus, this mAb would be useful in studying the role of LFA-1/ICAM-1 in graft rejection as well as

model to investigate the immunoregulatory effects of in vivo administration of anti-CD11/CD18 antibodies in organ/tissue

other inflammatory responses. It would also allow the use of an animal

IT Inflammation

(monoclonal antibody recognizing canine LFA-1
antigen in)

IT Canis familiaris

(monoclonal antibody recognizing canine LFA-1 antigen prepn. and characterization)

IT Mitogens

ΙT

(monoclonal antibody recognizing canine LFA-1
antigen reactivity with)

IT Immunoglobulins

RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(G1, monoclonal, monoclonal antibody

recognizing canine LFA-1 antigen prepn. and characterization) Lymphocyte

(T-cell, monoclonal antibody recognizing canine LFA-1 antigen reactivity with)

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Integrins
TT
    RL: BAC (Biological activity or effector, except adverse); BOC (Biological
    occurrence); BSU (Biological study, unclassified); MFM (Metabolic
     formation); BIOL (Biological study); FORM (Formation, nonpreparative);
    OCCU (Occurrence)
        (antigens LFA-1, monoclonal antibody recognizing
        canine LFA-1 antigen prepn. and characterization)
ΙT
    Thymus gland
        (thymocyte, monoclonal antibody recognizing canine
        LFA-1 antigen reactivity with)
TΤ
       Pancreatic islet of Langerhans
        (transplant, monoclonal antibody
        recognizing canine LFA-1 antigen reactivity with)
    ANSWER 43 OF 49 HCAPLUS COPYRIGHT 2002 ACS
    1994:549087 HCAPLUS
ΑN
    121:149087
DN
    Methods for inducing long-term immunological non-responsiveness to
ΤI
    allografts
    Orosz, Charles G.; Ferguson, Ronald G.; Kincade, Paul W.
ΤN
    Ohio State University Research Foundation, USA; Oklahoma Medical Research
PA
    Foundation
    PCT Int. Appl., 40 pp.
SO
    CODEN: PIXXD2
DΤ
    Patent
    English
LA
IC
    ICM A61K039-395
CC
    1-7 (Pharmacology)
    Section cross-reference(s): 15
FAN.CNT 1
    PATENT NO.
                  KIND DATE
                                          APPLICATION NO. DATE
     ______
                                          ______
                     A1 19940721
                                          WO 1994-US391
                                                          19940112 <---
    WO 9415639
        W: FI, HU, JP, NO, PL, RU
        RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRAI US 1993-3981
                            19930115
                                     <--
    Methods are provided for inducing long-term non-responsiveness to an
    allograft, even in the absence of immunosuppressive agents. The
    methods include interfering with the interaction of VLA-4 of the
    allograft recipient and VCAM-1 of the allograft. This
    can be accomplished e.g. by administration of an antibody with
    the same effective specificity as monoclonal antibody
    M/K-2 (a rat IgG1 recognizing VCAM-1) for a time period and in an amt.
    sufficient to induce long-term non-responsiveness to the allograft
       The effect of M/K-2 in mice with cardiac allografts is
    allograft nonresponsiveness VLA4 VCAM1 interaction inhibitor;
ST
    monoclonal antibody VLA4 allograft
    nonresponsiveness
    Transplant and Transplantation
ΙT
        (cardiopulmonary, long-term immunol. non-responsiveness to, induction
        of, VLA-4/VCAM-1 interaction interference in)
    Antibodies
IT
     RL: BIOL (Biological study)
        (to VCAM-1, for inducing long-term immunol. non-responsiveness to
        allografts)
TT
     Sialoglycoproteins
     RL: BIOL (Biological study)
        (VCAM-1 (vascular cell adhesion mol. 1), VLA-4 interaction with,
        inhibition of, for inducing long-term immunol. non-responsiveness to
        allografts)
```

ΙT

Transplant and Transplantation

(allo-, long-term immunol. non-responsiveness to, induction of, VLA-4/VCAM-1 interaction interference in) ΙT Antibodies RL: BIOL (Biological study) (monoclonal, to VCAM-1, for inducing long-term immunol. non-responsiveness to allografts) IΤ Bone marrow Heart Kidney Liver Lung Muscle Pancreatic islet of Langerhans Skin (transplant, long-term immunol. non-responsiveness to, induction of, VLA-4/VCAM-1 interaction interference in) ΤТ Integrins RL: BIOL (Biological study) (.alpha.4.beta.1, VCAM-1 interaction with, inhibition of, for inducing long-term immunol. non-responsiveness to allografts) L65 ANSWER 44 OF 49 HCAPLUS COPYRIGHT 2002 ACS 1994:267794 HCAPLUS ΑN DN 120:267794 A potential immunosuppressive effect of anti-lymphocyte ΤI function-associated antigen-1 monoclonal antibody on islet transplantation Gotoh, Mitsukazu; Fukuzaki, Takayuki; Monden, Morito; Dono, Keizo; Kanai, ΑU Toshio; Yagita, Hideo; Okumura, Kou; Mori, Takesada Med. Sch., Osaka Univ., Suita, 565, Japan CS Transplantation (1994), 57(1), 123-6 SO CODEN: TRPLAU; ISSN: 0041-1337 DT Journal LA English 15-3 (Immunochemistry) CC Section cross-reference(s): 1 The immunosuppressive potentials of mAbs to lymphocyte AΒ function-assocd. antigen-1 (LFA-1) and CD2 mols. were examd. in murine islet transplantation. Crude digested islets from BALB/c (H-2d) mice were transplanted into the renal subcapsular space of streptozotocin-induced diabetic C57BL/6 (H- 2b) mice. The rat mAbs of KBA (anti-LFA-1) and RM2-1 (anti-CD2) were given i.p. immediately after transplantation and on the first day after grafting at a dose of 0.1 mg/mouse/day. In non-treated animals, the islet allografts were acutely rejected with a mean survival time (MST) of 19.6 days. Control isotype-matched anti-CD18 treatment did not prolong the MST of 12.8 days. Anti-LFA-1 treatment alone produced indefinite survival in 5 of 10 recipients with MST of 72.2 days. treatment failed to do so, although MST was marginally prolonged to 32.8 days. When both mAbs were given together, addnl. benefit with anti-CD2 treatment was not obsd. (MST: 77.4 days). In spite of the unresponsiveness to islet allografts, the animals did not suffer from any severe infectious disease. Mice bearing long-term functioning islets rejected third-party skin grafts as well as islet donor strain skin grafts. The long-term surviving islet allografts were also rejected coincidentally. These results indicate that a perioperative short course of anti-LFA-1 mAb treatment can induce unresponsiveness to islet allografts, although it is not systemic, and that costimulatory signals through these adhesion mols. play a central role in inducing an immune response leading to rejection of the allografted islets.

LFA1 antigen antibody pancreatic islet transplantation

; immunosuppression islet transplantation monoclonal

ST

```
antibody LFA1
ΙT
     Immunosuppression
        (by monoclonal antibody to LFA-1 antigen, of
        pancreatic islet transplant rejection in diabetes model)
IT
     Immunosuppressants
        (monoclonal antibody to LFA-1 antigen as, in
        pancreatic islet transplant model)
     Diabetes mellitus
IT
        (pancreatic islet transplant in model of, rejection of,
        suppression of, by monoclonal antibody to LFA-1
        antigen)
ΙT
     Immunoglobulins
     RL: BIOL (Biological study)
        (G2a, monoclonal, to LFA-1 antigen, immunosuppression of pancreatic
        islet transplant rejection in diabetes model by)
ΙT
     Transplant and Transplantation
        (allo-, of pancreatic islet, rejection
        of, suppression of, by monoclonal antibody to LFA-1
        antigen)
ΙT
    Pancreatic islet of Langerhans
        (allotransplant, rejection of, suppression of, by
       monoclonal antibody to LFA-1 antigen)
TΤ
    Integrins
    RL: BIOL (Biological study)
        (antigens LFA-1, monoclonal antibody to,
        immunosuppression of pancreatic islet transplant rejection in
        diabetes model by)
L65
    ANSWER 45 OF 49 HCAPLUS COPYRIGHT 2002 ACS
ΑN
    1994:578 HCAPLUS
DN
    120:578
    Graft copolymers of polycationic species and water-soluble
TΙ
    polymers for treatment of cells
ΙN
    Desai, Neil P.; Soon-Shiong, Patrick; Sandford, Paul A.; Heintz, Roswitha
    Clover Consolidated, Ltd., Switz.
PΑ
SO
     PCT Int. Appl., 43 pp.
    CODEN: PIXXD2
DT
    Patent
    English
LA
TC.
     ICM A01N001-02
     ICS C12P001-00; C12N005-00
CC
     1-7 (Pharmacology)
FAN.CNT 1
                                        APPLICATION NO. DATE
     PATENT NO.
                   KIND DATE
                    A1 19930930 WO 1993-US2609 19930322 <--
     WO 9318649
        W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP,
             KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE,
             SK, UA, US
         RW: AT, BE, CH, DE, DK, ES, FR, GB, IE, IT, LU, NL, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, ML, MR, SN, TD
                                                          19920323 <--
                                         US 1992-856137
    US 5578442
                     Α
                           19961126
                                          AU 1993-38163
                                                          19930322 <--
    AU 9338163
                      Α1
                           19931021
                                          US 1996-697885
                                                         19960829 <--
    US 5834556
                           19981110
                           19920323 <--
PRAI US 1992-856137
    WO 1993-US2609
                           19930322 <--
    Cells are rendered nonadhesive and/or nonimmunogenic by treatment with a
AΒ
     cationic polymer onto which is grafted a water-sol. polymer.
    The cationic polymer may be PEI, polyallylamine, polyvinylpyridine, a
     cationic polysaccharide, or an amino acid homopolymer or random copolymer.
     The water-sol. polymer may be PEG, poly(vinyl alc.), poly(acrylic acid),
     polyacrylamide, PVP, etc. The graft copolymer may be removed
```

```
from the cells by treatment with an anionic species. The copolymer can
     also be used in cell preservation, liposome stabilization, etc. Thus,
     anchorage-dependent human fibroblasts treated with poly-L-lysine-
     grafted PEG showed no substrate adherence or aggregation in
     suspension, but good viability for >24 h and a smooth, spherical morphol.
     cell adhesion graft copolymer; immunogenicity cell graft
ST
     copolymer
     Polyethers, biological studies
ΙT
     RL: BIOL (Biological study)
        (-polyamines, graft, with water-sol. polymers, animal cell
        adhesion inhibition by)
TT
     Adrenal gland
       Pancreatic islet of Langerhans
     Thyroid gland
        (adhesion of cells of, inhibition of, by cationic polymer with
        engrafted water-sol. polymer)
ΙΤ
     Animal cell
     Fibroblast
        (adhesion of, inhibition of, by cationic polymer with engrafted
        water-sol. polymer)
ΙΤ
     Antigens
     RL: BIOL (Biological study)
        (animal cell function as, inhibition of, by cationic polymer with
        engrafted water-sol. polymer)
ΙT
     Anions
     Albumins, biological studies
     RL: BIOL (Biological study)
        (cationic polymer with engrafted water-sol. polymer removal
        from animal cells with)
     Nerve
ΤТ
        (network of, on surface, formation of, cationic polymer with
        engrafted water-sol. polymer in mask for)
ΙΤ
     Transplant and Transplantation
        (of pancreatic islet, poly-L-lysine/PEG
        graft copolymer effect on)
ΙT
     Liposome
        (stabilization of, cationic polymer with engrafted water-sol.
        polymer for)
ΙΤ
     Receptors
     RL: BIOL (Biological study)
        (vitronectin binding by, on fibroblast surface, poly-L-lysine/PEG
        graft copolymer inhibition of)
ΤТ
     Cell membrane
        (water-sol. polymer assocn. with, grafting onto cationic
        polymer effect on)
     Polymers, biological studies
TT
     Polysaccharides, biological studies
     RL: BIOL (Biological study)
        (water-sol., graft, with cationic polymers, animal cell
        adhesion inhibition by)
     Lymphoblast
TT
        (T-cell, adhesion of, inhibition of, by cationic polymer with
        engrafted water-sol. polymer)
     Polyelectrolytes
ΙT
        (anionic, cationic polymer with engrafted water-sol. polymer
        removal from animal cells with)
     Adhesion
TΤ
        (bio-, of animal cells, inhibition of, by cationic polymer with
        engrafted water-sol. polymer)
ΙT
     Polyelectrolytes
        (cationic, water-sol. polymer-engrafted, animal cell adhesion
        inhibition by)
```

ΙΤ

Liver

```
(hepatocyte, adhesion of, inhibition of, by cationic polymer with
        engrafted water-sol. polymer)
TT
     Virus, animal
        (human immunodeficiency, T-lymphoblast sensitive to, adhesion of,
        inhibition of, by cationic polymer with engrafted water-sol.
        polymer)
     Coating materials
IT
        (masking, cationic polymer with engrafted water-sol. polymer
        as, for neural network formation)
     Polyethers, biological studies
TΤ
     RL: BIOL (Biological study)
        (polyamine-, graft, with water-sol. polymers, animal cell
        adhesion inhibition by)
TΤ
     Polyamines
     RL: BIOL (Biological study)
        (polyether-, graft, with water-sol. polymers, animal cell
        adhesion inhibition by)
     Amino acids, polymers
IT
     RL: BIOL (Biological study)
        (polymers, graft, with water-sol. polymers, animal cell
        adhesion inhibition by)
ΙT
     Animal growth regulators
     RL: BIOL (Biological study)
        (vitronectins, binding of, to receptor on fibroblast surface,
        poly-L-lysine/PEG graft copolymer inhibition of)
     51-61-6, Dopamine, biological studies
ΤТ
     RL: BIOL (Biological study)
        (adhesion of cells secreting, inhibition of, by cationic polymer with
        engrafted water-sol. polymer)
     9000-07-1, Carrageenan 9000-69-5, Pectin 9004-34-6D, Cellulose,
IΤ
                9004-61-9, Hyaluronic acid
                                            9005-32-7D, Alginic acid, salts
     9005-49-6, Heparin sulfate, biological studies
     9007-28-7, Chondroitin sulfate
     RL: BIOL (Biological study)
        (cationic polymer with engrafted water-sol. polymer removal
        from animal cells with)
     151754-91-5
TT
     RL: BIOL (Biological study)
        (fibroblast adhesion inhibition by)
    ANSWER 46 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
     1993:552366 HCAPLUS
ΑN
DN
     119:152366
     Study on effects of exogenous somatostatin on endocrine and exocrine
TΙ
     functions of segmental autotransplanted pancreas in man
ΑIJ
     Emoto, Takashi
     Med. Sch., Osaka Univ., Suita, 565, Japan
CS
     Osaka Daigaku Igaku Zasshi (1993), 45(3), 213-24
SO
     CODEN: ODIZAK; ISSN: 0369-710X
DT
     Journal
     Japanese
LA
     2-5 (Mammalian Hormones)
CC
     In an attempt to clarify the effects of exogenous somatostatin on
AB
     endocrine and exocrine function after segmental
     autotransplantation of the pancreas, a long-acting somatostatin
     analog (SMS201-995) was administered by s.c. injection to 6 patients on
     whom segmental autotransplantation of the pancreas had been
     performed following total pancreatectomy. Saline was injected s.c. as a
     control. Test meal (Ensure Liq.: 250 mL) was given 1 h after s.c.
     injection. Plasma levels of glucose (BS) and insulin (IRI),
     vol. of pancreatic juice (VOL), and bicarbonate output (BO), amylase
     output (AO) and lipase output (LO) of pancreatic juice were measured.
```

During the basal period prior to ingestion, insulin secretion,

ST ΙT

ΙT

IT

IT

ΙΤ

ΙΤ

IΤ

ΑN

DN

ΤT

TN

PA

SO

 $\mathsf{DT}$ 

LA

IC

CC

PΤ

EP 658112

B1 20010711

VOL, and AO were suppressed with 0.156, 0.625, 0.625 .mu.g/kg of exogenous somatostatin, resp., and BO and LO were suppressed with 2.5 .mu.g/kg compared with the injection of saline. During the 1st h after test meal, insulin secretion was suppressed with 0.15 .mu.g/kg of exogenous somatostatin, and VOL, BO, AO and LO were each suppressed with 0.625 .mu.g/kg. Thus, endocrine function of the transplanted pancreas may be inhibited by SMS201-995 more sensitively than exocrine function, in terms of dose-dependency. somatostatin pancreas transplantation endocrine exocrine Pancreatic islet of Langerhans (hormone secretion by, after pancreas autotransplantation in human) Pancreatic juice (vol. of, after pancreas autotransplantation, somatostatin effect on, in humans) Transplant and Transplantation (auto-, of pancreas, endocrine and exocrine function of, somatostatin effect on, in humans) (autotransplant, endocrine and exocrine function of, somatostatin effect on, in humans) 51110-01-1, Somatostatin RL: BIOL (Biological study) (endocrine and exocrine function of autotransplanted pancreas response to, in humans) 50-99-7, Glucose, biological studies 9004-10-8, Insulin , biological studies RL: BIOL (Biological study) (of blood plasma, after pancreas autotransplantation, somatostatin effect on, in humans) 1393-25-5, Secretin 71-52-3, Bicarbonate, biological studies 9000-92-4, Amylase **9001-62-1**, Lipase 9011-97-6, CCK RL: BIOL (Biological study) (secretion of, by pancreas after autotransplantation, somatostatin effect on, in humans) ANSWER 47 OF 49 HCAPLUS COPYRIGHT 2002 ACS L65 1993:241013 'HCAPLUS 118:241013 Antithrombogenic sulfated glycosaminoglycan conjugates with polymers Larsson, Rolf; Westberg, David; Formgren, Birgitta; Uhlin, Anders Corline Systems AB, Swed. PCT Int. Appl., 31 pp. CODEN: PIXXD2 Patent English ICM A61K031-725 ICS A61K047-48; A61L033-00; C08B037-10 63-7 (Pharmaceuticals) FAN.CNT 1 KIND DATE APPLICATION NO. DATE PATENT NO. ---------Al 19930401 WO 9305793 WO 1992-SE672 19920925 <--W: AU, CA, JP, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE 19910926 <--SE 9102798 A 19930327 SE 1991-2798 SE 470006 В 19931025 19940217 SE 470006 С A1 19930427 AU 9226646 AU 1992-26646 19920925 <--JP 06510783 19941201 JP 1992-505995 19920925 <--Т2 19950621 EP 1992-920440 19920925 <--EP 658112 Α1

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R: DE, FR, GB, IT
                                           US 1994-211224 19940325 <--
    US 5529986
                       Α
                           19960625
PRAI SE 1991-2798
                            19910926
                                     <~-
                       Α
    WO 1992-SE672
                      Α
                            19920925 <--
    Sulfated glycosaminoglycan conjugates with polymers are prepd. and used to
    make surfaces antithrombogenic. Heparin was coupled to
    N-succinimidyl-3-(2-pyridyldithio)-propionate and then conjugated to
    intraocular lenses made of poly(Me methacrylate). The surface-heparinized
    lenses were incubated in human citrated whole blood for 60min and the
    lenses were then washed. Platelet adhesion to the heparinized lenses was
    reduced by 98% as compared with the untreated control lenses.
    antithrombogenic glycosaminoglycan sulfate conjugate polymer; intraocular
    lens heparin polymethacrylate conjugate
    Polymers, compounds
ΙT
    RL: BIOL (Biological study)
        (aliph., conjugates, with sulfated glycosaminoglycans, antithrombogenic
       activity of)
IΤ
    Medical goods
        (antithrombogenic, surface treatment of, with antithrombogenic sulfated
       glycosaminoglycan conjugates)
    Polysaccharides, compounds
ΙT
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); BIOL (Biological study)
        (conjugates, with sulfated glycosaminoglycan, antithrombogenic activity
       of)
ΙT
    Lenses
        (intraocular, surface treatment of, with antithrombogenic sulfated
       glycosaminoglycan conjugates)
ΙT
    Imines
    RL: BIOL (Biological study)
        (poly-, conjugates, with sulfated glycosaminoglycans, antithrombogenic
       activity of)
    Glycosaminoglycans, compounds
ΙT
    RL: BIOL (Biological study)
        (sulfated, conjugates, with polymer, antithrombogenic activity of)
     9011-14-7, Poly(methyl methacrylate)
TT
     RL: BIOL (Biological study)
        (intraocular lenses manufd. with, surface treatment of, with
       antithrombogenic sulfated glycosaminoglycan conjugates)
    9002-13-5DP, Urease, conjugates with polylysine and heparin
                                                                   9002-98-6DP,
ΙT
    conjugates with sulfated glycosaminoglycans
                                                   9005-49-6DP, Heparin,
                          9012-76-4DP, Chitosan, conjugates with sulfated
    polymer conjugates
                          24937-49-3P . 25104-12-5DP, conjugates with sulfated
    glycosaminoglycans
                          25104-18-1DP, Polylysine, conjugates with sulfated
    glycosaminoglycans
    glycosaminoglycans
                          30551-89-4DP, Polyallylamine, conjugates with
    sulfated glycosaminoglycans
                                  38000-06-5DP, Polylysine, conjugates with
    sulfated glycosaminoglycans
                                   71550-12-4DP, Polyallylamine hydrochloride,
     conjugates with sulfated glycosaminoglycans
    RL: PREP (Preparation)
        (prepn. of, as antithrombogenic medical agents)
ΙT
     9002-88-4, Polyethylene
     RL: BIOL (Biological study)
        (tubing, surface treatment of, with antithrombogenic sulfated
        glycosaminoglycan conjugates)
    ANSWER 48 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
    1993:198264 HCAPLUS
ΑN
     118:198264
DN
    Method for manufacturing a protein membrane for encapsulating biological
TΙ
     and/or biologically active materials
ΙN
     Tatarkiewicz, Krystyna
     Polska Akademia Nauk, Instytut Biocybernetyki i Inzynierii Biomedycznej,
PA
```

Pol.

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SO
    Pol., 2 pp.
    CODEN: POXXA7
DT
    Patent
LA
    Polish
    ICM C12N005-00
IC
    ICS A61K009-52
CC
     63-7 (Pharmaceuticals)
    Section cross-reference(s): 14
FAN.CNT 1
                    KIND DATE
                                        APPLICATION NO. DATE
    PATENT NO.
     _____ ~~~
                                          _____
    PL 154373 B1 19910830 PL 1987-267078 19870730 <--
PΙ
    An artificial membrane can be prepd. which is suitable for encapsulating
AB
    biol. active materials or cells or tissue fragments for
    transplantation into the body. Thus, drops of 1.2% aq. soln. of
    Na alginate contg. pancreatic islets were added to a 1.5% soln. of CaCl2
    in H2O, whereby gelatinous spherules were formed. Then the supernatant
    was removed from the spherules and replaced with a 0.2% soln. of
    polyethylenimine. After 2 min the microcapsules were rinsed with a 1%
    soln. of CaCl2, water, and physiol. saline buffered to pH 7.4. In
    succession, they were transferred to a bath contg. 0.1% protamine sulfate
    for 3 min, then the microcapsules were immersed in a heparin
    soln. (100 IU heparin/1 mg protamine). After 3 min. the
    microcapsules were washed repeatedly in physiol. saline at pH 7.4.
    pancreas islet transplant membrane microcapsule; alginate
ST
    protamine pancreas islet microcapsule
ΙT
    Encapsulation
        (of cells for transplantation, protein membrane for, prepn.
        of)
TΨ
     Transplant and Transplantation
        (of pancreatic islet, protein membrane for
        encapsulation of, prepn. of)
    Membrane, biological
TT
        (prepn. of proteinaceous, for encapsulating biol. active substances and
        cells for transplantation)
IT
     Pharmaceutical dosage forms
        (microcapsules, of cells, for transplantation, protein
       membrane for, prepn. of)
ΙT
    Protamines
    RL: BIOL (Biological study)
        (sulfates, in prepn. of membrane for encapsulating biol. active
        substances and cells for transplantation)
ΙT
    Pancreatic islet of Langerhans
        (transplant, protein membrane for encapsulation of, prepn.
        of)
ΙT
     9005-38-3, Sodium alginate
     RL: BIOL (Biological study)
        (in prepn. of membrane for encapsulating biol. active substances and
        cells for transplantation)
    ANSWER 49 OF 49 HCAPLUS COPYRIGHT 2002 ACS
L65
    1991:575423 HCAPLUS
AN
DN
    115:175423
ΤI
    Persistent restoration of endogenous insulin production in
     animals with insulin-dependent diabetes
    Kudryashov, B. A.; Ul'yanov, A. M.
ΑU
    Lab. Physiol. Biochem. Blood Coagulation, M. V. Lomonosov State Univ.,
CS
    Moscow, USSR
     Voprosy Meditsinskoi Khimii (1991), 37(4), 40-3
SO
     CODEN: VMDKAM; ISSN: 0042-8809
DT
     Journal
LA
     Russian
CC
     2-6 (Mammalian Hormones)
```

Implantation of allogenic .beta.-cells into animals with alloxan diabetes AΒ did not produce a persistent pos. effect. The implanted .beta.-cells lost their viability as a result of the toxic effect of a natural diabetogenic factor occurring in blood plasma during insulin-dependent diabetes. Long-term administration of heparin to these animals within the first 90 days of the expt. prevented the neg. phenomenon and to neutralize the diabetogenic factor activity. Under these conditions the implanted .beta.-cells effectively produced endogenous insulin and the symptoms of diabetes disappeared within 14 mo.

insulin beta cell transplant diabetes heparin ST

ΙT Blood plasma

(diabetogenic factor of, in diabetes, heparin effect on)

Transplant and Transplantation, animal IT

(of pancreatic islet .beta.-cells, survival of, in diabetes, heparin increase of)

ΙT Diabetes mellitus

(pancreatic islet .beta.-cell transplant survival in,

heparin increase of)

IT Pancreatic islet of Langerhans

(transplant, survival of, in diabetes, heparin effect on)

9004-10-8, Insulin, biological studies ΙT

RL: FORM (Formation, nonpreparative)

(formation of, by .beta.-cell transplants in diabetes, heparin effect on)

103333-90-0, Diabetogenic factor ΤТ

RL: BIOL (Biological study)

(of blood plasma, in diabetes, .beta.-cell transplant survival inhibition by, heparin attenuation of)

ΙT 9005-49-6, Heparin, biological studies

RL: BIOL (Biological study)

(pancreatic islet .beta.-cell transplant survival increase by, in diabetes)

## => fil reg

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

17 DEC 2002 HIGHEST RN 476608-54-5 STRUCTURE FILE UPDATES: 17 DEC 2002 HIGHEST RN 476608-54-5 DICTIONARY FILE UPDATES:

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d ide can tot

L68 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2002 ACS 9005-49-6 REGISTRY RN

```
Heparin (8CI, 9CI)
                         (CA INDEX NAME)
CN
OTHER NAMES:
     .alpha.-Heparin
CN
CN
     Bemiparin
CN
     Certoparin
CN
     Clexane
CN
     Clivarin
CN
     Clivarine
CN
     CY 216
     CY 222
CN
CN
     Dalteparin
CN
     Enoxaparin
CN
     Fluxum
CN
     FR 860
CN
     Fragmin A
     Fragmin B
CN
CN
     Fraxiparin
CN
     Heparin subcutan
CN
     Heparin sulfate
CN
     Heparinic acid
CN
     KB 101
CN
     Multiparin
CN
     Novoheparin
CN
     OP 386
CN
     OP 622
CN
     Pabyrn
CN
     Parnaparin
CN
     Parvoparin
CN
     Reviparin
CN
     Sandoparin
CN
     Sublingula
CN
     Tinzaparin
CN
     Vetren
CN
     Vitrum AB
     9075-96-1, 11078-24-3, 11129-39-8, 104521-37-1, 37324-73-5, 91449-79-5
DR
ΜF
     Unspecified
CI
     PMS, COM, MAN
PCT
     Manual registration, Polyester, Polyester formed
                  ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
LC
     STN Files:
       CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST,
       CIN, CSCHEM, DDFU, DIOGENES, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES,
       EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
       NAPRALERT, NIOSHTIC, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, TOXCENTER,
       USAN, USPATZ, USPATFULL
         (*File contains numerically searchable property data)
                      DSL**, EINECS**, WHO
     Other Sources:
         (**Enter CHEMLIST File for up-to-date regulatory information)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
           19622 REFERENCES IN FILE CA (1962 TO DATE)
            1862 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           19655 REFERENCES IN FILE CAPLUS (1962 TO DATE)
            1: 137:375368
REFERENCE
                137:375271
REFERENCE
            2:
REFERENCE
            3:
                137:370345
               137:367979
REFERENCE
            4:
REFERENCE
            5: 137:365538
```

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REFERENCE
           6: 137:365455
REFERENCE
           7:
               137:365406
               137:363702
REFERENCE
            8 :
REFERENCE
            9:
               137:363700
REFERENCE 10: 137:363407
L68 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2002 ACS
     9004-10-8 REGISTRY
     Insulin (9CI) (CA INDEX NAME)
OTHER NAMES:
    Actrapid
CN
CN
     Actrapid HM
    Actrapid MC
CN
CN
    Decurvon
CN
    Dermulin
CN
    Endopancrine
CN
    Exubera
    HMR 4006
CN
CN
    Iletin
    Insular
CN
    Insulin Injection
CN
CN
    Insulyl
    Intesulin B
CN
CN
    Iszilin
CN
    Musulin
     8049-67-0, 8049-95-4, 9004-12-0, 9045-63-0, 9045-65-2, 9045-66-3,
DR
     9045-67-4, 9066-39-1, 9066-40-4, 11081-38-2, 57126-42-8, 37243-75-7,
     37294-43-2, 69090-47-7, 88026-11-3, 88026-12-4
MF
     Unspecified
CI
     PMS, COM, MAN
PCT Manual registration
     STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
LC
       CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM,
       CSNB, DDFU, DIOGENES, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
       MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA,
       PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL, VTB
         (*File contains numerically searchable property data)
     Other Sources:
                     EINECS**, WHO
         (**Enter CHEMLIST File for up-to-date regulatory information)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
           81573 REFERENCES IN FILE CA (1962 TO DATE)
            1493 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           81593 REFERENCES IN FILE CAPLUS (1962 TO DATE)
           1: 137:375275
REFERENCE
REFERENCE
            2:
               137:375234
REFERENCE
               137:375159
            3:
               137:375137
REFERENCE
            4:
               137:370080
REFERENCE
            5:
REFERENCE
            6:
               137:369295
            7: 137:369293
REFERENCE
```

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REFERENCE
          8: 137:369288
          9: 137:369266
REFERENCE
REFERENCE 10: 137:369259
L68 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2002 ACS
    9000-94-6 REGISTRY
    Antithrombin (9CI) (CA INDEX NAME)
OTHER NAMES:
CN
    Antithrombin III
CN
    Heparin cofactor
    Heparin cofactor B
CN
CN
    Org 10849
CN
    Thrombin inhibitor
     90170-80-2
AR
     9041-91-2, 52014-67-2
DR
    Unspecified
MF
CI
     PMS, COM, MAN
PCT Manual registration
                 ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
LC
     STN Files:
       CA, CANCERLIT, CAPLUS, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU,
       DIOGENES, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT,
       IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PHAR, PHARMASEARCH, PROMT,
       RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:
                      EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
            4758 REFERENCES IN FILE CA (1962 TO DATE)
             504 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            4765 REFERENCES IN FILE CAPLUS (1962 TO DATE)
REFERENCE
            1: 137:369288
REFERENCE
            2: 137:367979
REFERENCE
            3:
               137:367705
               137:365455
REFERENCE
            4:
               137:365406
REFERENCE
            5:
REFERENCE
            6:
               137:362854
            7: 137:350511
REFERENCE
               137:348831
REFERENCE
            8:
               137:348353
REFERENCE
            9:
REFERENCE 10: 137:346941
=> d his
     (FILE 'HOME' ENTERED AT 10:31:27 ON 18 DEC 2002)
                SET COST OFF
     FILE 'REGISTRY' ENTERED AT 10:31:38 ON 18 DEC 2002
```

E HEPARIN/CN

1 S E3

L1

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L2
            707 S HEPARIN
            706 S L2 NOT L1
L3
                E RGD/CN
                E THROMBIN/CN
              1 S E3
L4
                E ANTITHROMBIN/CN
              1 S E3
L5
                E INSULIN/CN
              1 S E3
L6
           6380 S INSULIN
L7
L8
           6379 S L7 NOT L6
     FILE 'HCAPLUS' ENTERED AT 10:34:24 ON 18 DEC 2002
                E LANGERHAN/CT
                E E6+ALL
                E ILSET/CT
                E ILSET/CW
L9
          17621 S LANGERHAN? (L) ISLET
                E PANCREATIC ISLET/CT
          15978 S E6-E31
L10
                E E36+ALL
L11
            349 S E1
                E E2+ALL
          15978 S E10
L12
L13
          17621 S L9-L12
L14
           1819 S L13 AND ?TRANSPLANT?
L15
            920 S L13 AND ?GRAFT?
                E TRANSPLANT/CT
           7190 S E3, E6-E24
L16
           8967 S E25-E36
L17
           8115 S E37-E48
L18
           4874 S E49-E60
L19
L20
           5088 S E61-E67
              1 S E68
L21
L22
            494 S E72
            811 S E73
L23
            811 S E76
L24
L25
           1565 S E71
                E E5+ALL
          29350 S E7-E12, E6+NT
L26
                E E38+ALL
           4404 S E2
L27
           1423 S L13 AND L16-L27
L28
L29
           1871 S L14, L15, L28
L30
             20 S L29 AND L1
L31
             23 S L29 AND L3
L32
             22 S L29 AND HEPARIN
L33
              4 S L29 AND RGD
              1 S L29 AND (ARG OR ARGIN?)()(GLY OR GLYC?)()(ASP OR ASPART?)
L34
                E RGD/CT
                E E7+ALL
              1 S L29 AND E3, E2
L35
L36
              0 S L29 AND ARGINYLGLYCYLASPART?
            146 S L29 AND (MAB OR MONOCLON? (L) ANTIBOD?)
L37
L38
             13 S L37 AND INTEGRIN
                 E FC RECEPTOR/CT
                 E E4+ALL
                E E2+ALL
L39
              5 S L37 AND E10-E12, E9+NT
                E E89+ALL
L40
             30 S L37 AND E7, E6+NT
L41
              3 S L39, L40 AND FC?
L42
              4 S L37 AND FC?
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1 S L29 AND (L4 OR THROMBIN OR FACTOR IIA)(L)(L5 OR ANTITHROMBIN
L43
            655 S L29 AND L6
L44
            88 S L29 AND L8
L45
           1045 S L29 AND INSULIN
L46
           1054 S L44-L46
L47
             57 S L30-L35, L38, L39, L41, L42, L43
L48
             31 S L48 AND L47
L49
             57 S L48, L49
L50
                E KORSGREN O/AU
             54 S E3, E4
L51
                E KOERSGREN O/AU
                E KOERSGEN O/AU
                E KEORSGREN O/AU
                E BENNET W/AU
             57 S E3-E13
L52
                E NILSSON B/AU
L53
            488 S E3-E16
                E NILSSON BO/AU
L54
            209 S E3-E11
                E LARSSON R/AU
L55
            143 S E3, E4
                E LARSSON ROLF/AU
L56
             95 S E3, E4
              4 S L51-L56 AND L50
L57
                E CORLINE/PA, CS
L58
              2 S E3-E6
              5 S L57, L58 AND L9-L58
L59
                E ANTICOAGULANT/CT
L60
          12531 S E10, E12
                E E12+ALL
                E E2+ALL
          12884 S E4+NT
L61
L62
             7 S L60, L61 AND L29
L63
             60 S L50, L62, L59
             49 S L63 AND (PD<=20000204 OR PRD<=20000204 OR AD<=20000204)
L64
             49 S L59, L64
L65
             11 S L63 NOT L65
L66
     FILE 'HCAPLUS' ENTERED AT 11:10:54 ON 18 DEC 2002
                SEL HIT RN
     FILE 'REGISTRY' ENTERED AT 11:27:50 ON 18 DEC 2002
L67
             12 S E1-E12
              3 S L1, L4-L6 AND L67
L68
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FILE 'REGISTRY' ENTERED AT 11:31:34 ON 18 DEC 2002